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ON FOUND SOUNDS AND GOING ELECTRONIC

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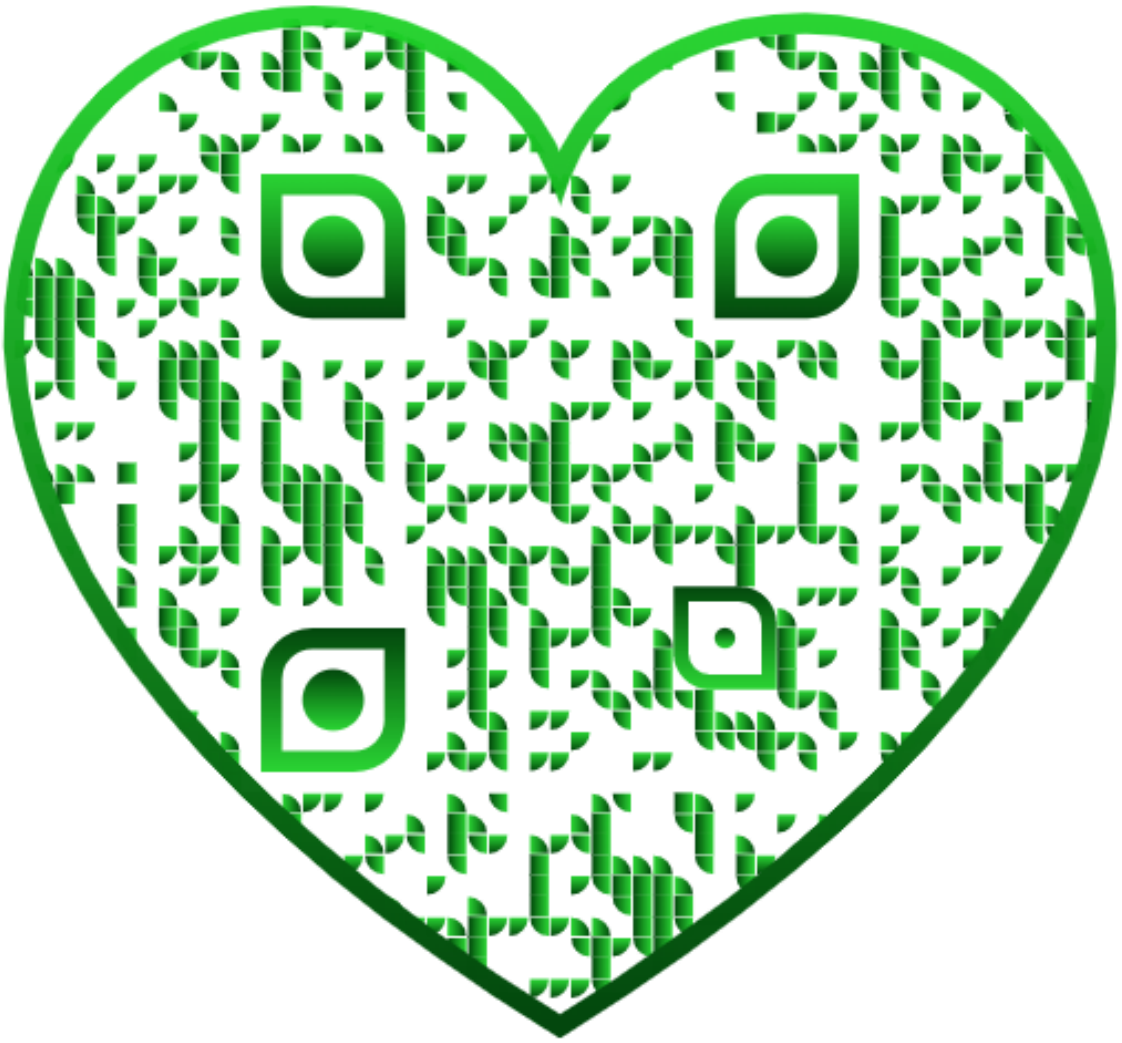

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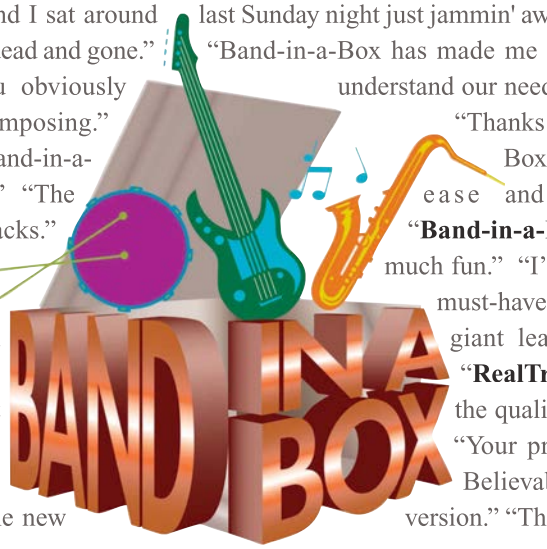

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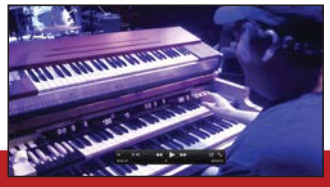

Online Now!

JoJo Herman of Widespread Panic walks us through his stage rig.

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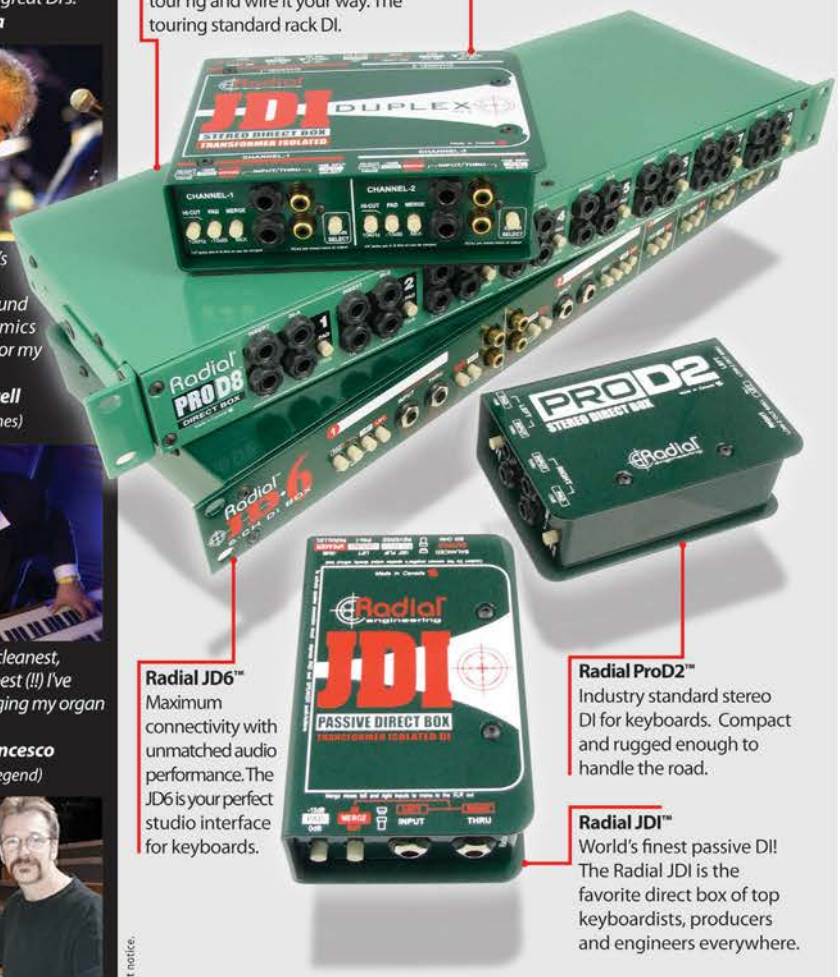

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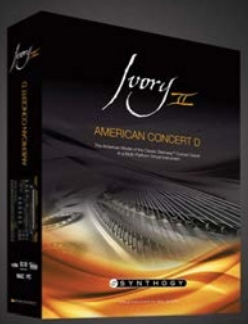

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Editor's Note

At the end of March, I was in the great American city of Boston visiting the considerable brain trust of music technology developers located there or nearby, which includes Avid, Cakewalk, iZotope, MOTU, and Kurzweil's R&D labs (where I saw something I *really* want to tell you about, but can't . . . yet). Boston is also home to some incredible keyboard-toting musical acts, including Amanda Palmer and the Dresden Dolls, the Cars, synth pop purveyors Freezepop, and of course, the rockin' B-3 organ of the band that shares the city's name. Some of my formative musical experiences involved underage road trips to Boston to hear bands and play synths that you couldn't find in my hometown of Burlington, Vermont.

The day before we sent this issue to the printing press was April 15, 2013—the day of the horrific bombing at the Boston Marathon. When you run a magazine with a very specific focus such as ours, and a natural disaster or human-caused act of mass violence occurs, you're always a bit torn about covering it. Do you go off topic and reiterate terrible news that other sources are already saturating people with, or do you say nothing and appear ambivalent or even insensitive?

I'm erring on the side of the former. As that Fred Rogers quotation that's been going around very astutely points out, one should always look for the helpers. To that end, I'd like to invite everyone to share any news about how the musical community—artists, labels, nightclubs, gear retailers, schools, whomever—is organizing or assisting with relief for those affected. At press time, it's too soon after the tragedy to have specific information in this regard, but please share via any of the means shown at right, and we'll post news of your benefit concert, crowdfunding campaign, or any other effort on our website and social media.

Rock on, Boston. *Keyboard* salutes your music and your indomitable spirit.

Stephen Fortner
Editor

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QUOTE OF THE MONTH

"The problem with electronic music today is that it doesn't say, "This is music." It says, "This is synthesizer music." If synthesizers were being used to their full potential, you'd only know they were synthesizers because you couldn't imagine what else could make the sounds you're hearing."
—MARC DOTY, ARCHIVIST, THE BOB MOOG FOUNDATION

HONOR ROLL

Keyboard salutes **Dave Smith** (right) and Roland founder **Ikutaro Kakehashi** for receiving a 2013 Technical Grammy Award for bringing MIDI to the music-making world 30 years ago. Look for more coverage of the 30th anniversary of MIDI in an upcoming issue.

Congratulations to one of our favorite musicians of all time, **Kate Bush**, on being made a Commander of the Order of the British Empire (the same chivalric order that bestows knighthoods) by Queen Elizabeth II this past April.

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DAVE 2013

Key Secrets Get HAPI

As the owner of two Korg Kaossilators, I enjoy musical surprises. My latest happy discovery is the HAPI Drum Mini (hapitones.com), a round steel instrument tuned to the beautiful Akebono scale. HAPI is an acronym for Hand Activated Percussion Instrument. Whenever I find myself playing the same patterns, I rotate the drum slightly, exposing a new set of pitch relationships. This works with MIDI pad controllers, too, like the Akai LPD8. Another happy discovery was finding the Akebono scale matched the "JPN" scale in the Kaossilators. David Battino

My First *Organ*.
Cameron Carpenter

The first time paradigm-shifting organist Cameron Carpenter encountered his signature instrument, the year was 1985, the axe was a Hammond B-3, and the location was his father's factory in rural Pennsylvania. But much more telling than the details of the encounter was the soon-to-be prodigy's reaction. "Vladimir Nabokov wrote about something he called the 'texture of time,'" says Cameron. "That's close to the best description I can give, that touching the organ is like touching time itself.

"I mean that not in a historically-informed way but almost literally," he continues. "A key on the organ will sound as long as it's held, putting the organist in a different relationship to time than any other musician. To touch this was to literally feel potential not just in the organ, but within myself, a potential I live to realize." To hear that potential manifested, check out Cameron's Telarc release *Cameron Live!* | **cameroncarpenter.com** | Michael Gallant

NEW GEAR

BY STEPHEN FORTNER

SPECIAL PREVIEW

AVID PRO TOOLS 11

You may have heard some of the bigger talking points already: a completely redesigned audio engine that improves both sound quality and processor efficiency; full 64-bit support; high-speed offline bounce; and inclusion of the same video engine as in Avid's Media Composer production platform so that composers-to-picture can view full HD video from multiple formats without the need for transcoding.

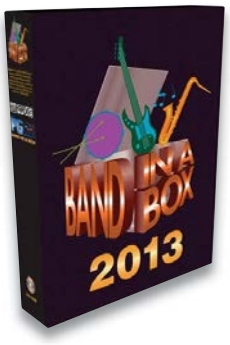
More impressive than any feature list, though, was how smoothly it worked in action. During a sneak peek at Avid HQ, we built a session of about 40 tracks that included multiple instances of Synthogy Ivory II, Toontrack Superior Drummer, and the Xpand and Vacuum soft synths—as well as EQ and dynamics inserts on nearly every channel and multiple reverb busses—running on an off-the-shelf quad-core Mac Mini. Standouts among myriad new tweaks include time stamping of automation for increased accuracy and a provision to bounce the contents of any output channel (such as a bus), not just the entire mix. You can also hide the mixer faders (to avoid visual clutter if you have a hardware control surface) and isolate plug-ins by type—EQ, dynamics, reverb, etc.—with a keystroke.

Avid the company is on musicians' minds as much as Pro Tools the product is—it's no secret that these days they have an image (deserved or not) as the corporate Goliath who has the most entrenched DAW. Having spent some quality time with new CEO Louis Hernandez Jr. and Senior Product VP Chris Gahagan (both musicians themselves), it seems to us like they really do get it and are committed to making Avid more connected and responsive to musicians. That, and nearly anyone you meet walking the halls there will engage you in passionate conversation about music and audio. We're already working on a comprehensive review of Pro Tools 11, so look for it soon.

Pro Tools 11: $699 | Upgrade from PT10: $299 | Upgrade from PT9 or M-Powered: $399 | avid.com

UNIVERSAL AUDIO APOLLO 16

WHAT Audio interface and DSP accelerator. **WITH** Sixteen analog line-level ins and outs on DB-25 connectors. Quad-core "Powered Plug-In" processing. FireWire 800 or optional Thunderbolt connectivity. XLR studio monitor outs. MADI mating of two units. **WHY** Where the "regular" Apollo (reviewed last month) is for the project studio musician who needs a little bit of everything, the 16 is aimed up a notch at producers who have a rack of favorite preamps and need lots of inputs. **$3,499 | uaudio.com**



PG MUSIC BAND-IN-A-BOX 2013

WHAT Accompaniment generation software. **WITH** Fifty new MIDI SuperTracks (MIDI recordings of session musicians) and 101 new RealTracks (audio tracks). Completely rewritten music notation features. **WHY** If you need to type in chord progressions and create engaging multi-part tracks—essentially programming your own arranger-keyboard-on-steroids—nothing else does what Band-in-a-Box does. **Pro: $129 | EverythingPAK (all add-ons on a hard drive): $569 | Audiophile Edition (all add-ons with uncompressed audio, on a hard drive): $669 | pgmusic.com**

KORG VOLCA SERIES

WHAT Analog synths/grooveboxes. **WITH** Volca Keys can do monophonic unison or three-voice chords, and features filter circuit from the vintage MiniKorg as well as a 16-step sequencer. Volca Bass is a "bass line" with an Electribe-derived sequencer and flexible bass sounds. Volca Beats is a six-voice analog drum machine that also has sampled cymbals. All feature a loop sequencer and analog or MIDI sync. **WHY** They're real analog, undeniably cool, and seemingly impossibly affordable. **$205 each | korg.com**

ROLAND BK-9

WHAT Personal (but high-endy) arranger workstation. **WITH** Roland's flagship "SuperNatural" sounds. Tons of rhythms and accompaniment styles. Organ modeling with mini drawbars. Built-in 16-track sequencer, "rhythm composer," and stereo WAV recording to USB media. Cool dual LCD. Five multi-effects engines plus dedicated reverb for XLR mic input. iOS integration includes apps for viewing SMF lyrics, a wireless "Air Recorder," and more. **WHY** You're a solo entertainer or songwriter who needs a lightweight but fully professional virtual band. **$2,499 | rolandus.com**

CLAVIA NORD LEAD 4

WHAT Virtual analog synth. **WITH** New modeling engine with two oscillators per voice. Wavetable mode with new formant wavetables. Morphing and Variation buttons allow "macro" control of multiple settings at once during performance. Four multitimbral parts. **WHY** If the Nord Wave didn't fill the hole in your heart left by the untimely demise of the Lead 3, this should. **$2,399 | nordkeyboards.com**

All prices are manufacturer's suggested retail (list) unless otherwise noted. Follow keyboardmag.com/news and @keyboardmag on Twitter for up-to-the-minute gear news.

GEORGE SALISBURY

UNLEASHING THE SYNTHETIC SOUNDS OF THE RETRO-FUTURE

BY BARBARA SCHULTZ

THE FLAMING LIPS' MULTI-INSTRUMENTALIST STEVEN DROZD OFTEN CITES "futro"—future meets retro—meaning what people in the past thought the future would be like. Futro can be whimsical or campy, like *The Jetsons* or *Lost In Space*. Or, it can sound like the Lips' latest album, *The Terror*: dark, rhythmic, sinister, and full of strange vibrations and distant voices.

"It sounds like the future that people thought was going to be, but a dystopian version of it," Drozd says. "It sounds like bad news." Creating tracks on *The Terror*, the Lips turned their songwriting approach on its head. Rather than develop songs, and then determine a sound or production approach, they chose sounds first—a synth patch or the hum of the refrigerator running or the buzz of an amp—and built songs around those sounds.

Many such sounds—and the layers of music they inspired—came from a handful of vintage keyboards: the band's EDP Wasp mono synth, a Yamaha A55 Electone organ that Drozd scored on eBay, and producer/engineer Dave Fridmann's Yamaha CS-60 and ARP 2600 synthesizers. This is hands-down the most keyboard-centric album the Lips have ever made, with the synths exemplifying the essence of "futro" often replacing what would traditionally be bass, drum, or guitar parts.

At what point did you all decide that you would make this shift to focus on keyboards? We've used keyboards a lot over the years, just not to this degree. When we started working on *The*

Steven Drozd (foreground) and Wayne Coyne of the Flaming Lips with (left to right) ARP 2600, Electronic Dream Plant Wasp, and Yamaha CS-60 synthesizers.

RECORDING THE LIPS

Engineer/producer Dave Fridmann has been working with the Flaming Lips for 25 years, so by this point he's used to not getting used to anything. The Lips have no interest in repeating themselves musically or sonically, which means no "go-to" miking schemes and no holds barred.

"We just have a bunch of mics set up, not in any particular order nor any particular room," Fridmann says. "All the rooms in my studio are wired, so it doesn't matter if you're in the bathroom, the kitchen, the shower—if something happens we can start recording.

"We'll make a point of setting up mics that are highly unusual. Our tech and circuit specialist, Greg Snow, has modified lots of different mics—military ones and Motorola dispatch mics—and built in different circuitry. I don't even know what's in there, but they sound amazing! You can record something from across the room because there's some kind of weird compressor already on there.

"We've also got one of the classic STC ball-and-biscuit mics. We use that quite a bit. You'll notice that I already described two omnidirectional mics, because we don't know where the sound is going to be coming from. Also, because the Lips introduce so much character with their own sounds and don't necessarily need microphones to create that character, I have a pair of DPA 4006s which we keep active at all times, just because they're clean and clear and will depict the sound that's happening in the room.

"It definitely keeps things interesting that we're not after 'good' recording as much as we're trying to capture an event, because there's no going back. It's like: The bass player and the drummer played at the time with one mic somewhere between the amp and the kick drum? That's the drum sound, and that's the bass sound. Get it and move on."

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J. MICHELLE MARTIN COYNE

Soft Bulletin in the mid-to-late '90s, the keyboards were all sample stuff—like trying to recreate an orchestra with French horns, oboes, and a big violin section. We wanted to have some of those emotional elements without actually having to hire a full orchestra. I think we were leaning this way when we made *Embryonic*, and I ended up using [Propellerhead] Reason—this digital Rhodes sound that we mixed in with some of the tracks.

Go forward to late 2011, when Sean Lennon gave us his Wasp keyboard. We went to his studio in New York, and it was like a museum, with all of these precious, super-collectible keyboards all in really good shape. And when he saw us fooling around with his Wasp, he decided to give it to us! We just fell in love with it. Then I had bought this junky old Yamaha organ that had been modified so you could actually use filters; it was like an organ that was trying to be a synthesizer. Dave Fridmann had a couple things around his studio [Tarbox Road in New York, where the Flaming Lips record and mix].

It's not a new invention in music, but once we started to fool with these keyboards, it felt new to us to say, "We're not going to put a bunch of chords on top of it with guitars. We're not going to do a bunch of chord progressions. We're just going to do this sound and see if we can make a song out of it."

There's a sonic consistency between the songs, with their synth rhythms and processed voices. What was the first song that made you feel like you knew what the album would sound like?

I think it was "You Are Alone." That has the Wasp doing a couple of things, but it's also a factor of when I started using this iPad app called Sylo Synth, where you can quickly make your own samples. I made a sample of my voice, and if you play a full chord, it sounds like a creepy choir recorded in, like, Poland in 1940. It has this otherworldly sound to it.

So, "You Are Alone," has a kind of messed-up-sounding loop that I made off the Wasp—just letting it oscillate on its own—and then a couple of those Silo Synth choir sounds, and then we also used the Wasp for these atonal noise blasts that sound like a broken machine.

Did specific sounds from specific keyboards tend to be used for certain parts in the arrangements?

We used the Wasp for a lot of things, because everything that comes out of the Wasp is great. With Dave's ARP 2600—which was just gathering dust in the corner of the studio—I don't think we ever played anything that was a melody or a pitch-based thing; that was all noises, and more "broken machine" sounding things. Dave's Yamaha CS-60, we used for more chord stuff.

An example of this would be the song "Turning Violent." It starts out with a super-low repeating sound—that's the Wasp. Wayne was trying to find a bass sound, and he hit the key and it just started oscillating. We didn't even have an idea of what the song was going to be at that point. But we put down the sound of the keyboard doing that, and then we made that whole song, starting with that.

There are also tape-fluttering sounds on that track, which I think always sound kind of sinister. That's actually from a Teenage Engineering OP-1. It's a four-track recorder, it's a modular synth, it's a drum machine—all this stuff. It's like the other end of the spectrum from the monophonic synths we used.

On the song "You Lust," the loop at the beginning is the ARP 2600. Then you hear these almost jazzy-sounding organ chords; that's the Yamaha CS-60. But the main riff is the Wasp. Then in the middle of that song, where it goes to that long, creepy voice—like a five-minute solo—that's the Sylo Synth, which is just the sample of a voice.

What sounds came from the Yamaha A55 Electone organ?

What's funny about that Yamaha was, I bought it on eBay and I had it shipped, and I didn't realize at first that it's the same model keyboard I taught myself to play on when I was 12! I was like, this is the same exact drum machine, same flute setting, clarinet setting. I couldn't believe it. So, the drum machine on *The Terror* is the drum machine in that old Yamaha.

How much of the sound of this record comes from the keyboards themselves, and how much comes from manipulating those sounds in the mix?

In the recording, there was definitely weird miking on this album. That's one of Dave Fridmann's many fortés. He loves to say, "Let's throw a mic in that corner of the room and see what it sounds like," and that gives the sounds some weird atmosphere. Dave also has things like this old Motorola intercom mic, which we used on vocals on this record. It's got a midrange-y "telephone voice" sound.

However, I'd say that sound *manipulation* was used less on this record than previously. Before, we'd go in with the idea that any sound can be altered at any time. But that's almost overwhelming, especially if you're working in the digital audio world, where you can always change *something*.

How did it change your process to commit to using a smaller pool of sounds, rather than saying, "The sky's the limit" sonically?

I think "the sky's the limit" can really bog you down. We've definitely been in situations where we're all over the place, and there are such endless possibilities, to the point where you don't even know where to start. So when it came time to make this record, it wasn't that hard to say, "Let's limit ourselves to these sounds." It was never like, "Oh, how are we going to do that?" I think all of us collectively agreed that we loved the keyboards and that there would be very little guitar and very little electric bass. Any bass on the record is usually the Wasp synth. I think when you do this, you're more able to focus in on something, which is really valuable, especially after you've been making records as long as we have. ♫

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FUN. ANDREW DOST ON BEING A NOT-SO-OVERNIGHT

"I'M IN BERLIN RIGHT NOW, SO FORGIVE ME IF THERE'S A SLIGHT DELAY," SAYS ANDREW DOST, KEYBOARDIST for six-time Grammy-nominated band Fun. Since their runaway smash single "We Are Young" catapulted the New York trio to international acclaim, Dost has been losing sleep and gaining frequent flier miles on the band's nearly non-stop worldwide tour. With their latest album *Some Nights* chock full of pop hooks, killer keyboards, and soaring Queen-like vocal harmonies, it's little wonder why. On a brief break between overseas shows, Dost made time to fill *Keyboard* in on what it's like in the eye of this sudden success hurricane.

SUCCESS

BY JON REGEN

I read that all three of you were in semi-successful bands before Fun. How has the transition from working musicians to overnight stars gone?

The funny thing is, all three of us were very happy with what we had going on—either in our two previous bands, or in the early stages of Fun. We had a loyal fan base, albums we were proud of, and the ability to tour successfully. So I think our success was already there, it was just on a different scale. It's all about being happy with whatever stage you're playing on. For us, we still know that our first order of business is making our fans and ourselves happy.

Who were some of the keyboardists that influenced you as you were developing your own sound?

I grew up playing trumpet in a band and then later I learned how to play guitar. I had taken piano lessons when I was in the second grade, but had basically given up on them after a few years to focus on guitar. But when Ben Folds Five appeared, I was reminded of how versatile and cool the piano could be, and how much you could really express on it. So they were a huge influence on me. I also want to compose for film, so many of my influences in terms of texture, harmony, and orchestration come from composers like Mark Mothersbaugh—who's my all-time favorite—as well as Danny Elfman, John Williams, and François de Roubaix, who did a lot of interesting work with unusual instrumentation. I think that's one of the big things I bring to the table in Fun.: a cinematic, orchestral approach to sound. A lot of that comes from composers like Debussy, whose work is just beyond perfect. But I love modern stuff, too. I love the Moog synthesizer, so I love Matt Sharp, and the Rentals.

Were there any interesting or unusual pieces of gear used on *Some Nights*?

In my mind, the album was mostly about the Minimoog Voyager, which is all over the record and played a critical role on the low end. We also used a lot of the Roland Juno-6 and the old Roland SH-101, which is awesome. I just bought the modern version, the SH-01, which is great, too.

Do you remember the first keyboard you ever owned?

My parents had a tiny white Casio keyboard when I was five that could make those crazy Samba beats. I don't remember what model it was, but I think I wrote my first "songs" on it. I think there's no keyboard or instrument out there that you can laugh at. You can get amazing sounds out of just about anything. These days I'm traveling with just a little M-Audio KeyStation Mini 32-key controller. I use it to compose on the road with Pro Tools and Sibelius.

What gear is in your touring rig with Fun.?

I'm using a Yamaha CP33 for acoustic piano sounds, which we just recently put inside of a gorgeous Grand Illusion case to make it look like a real piano. I think the CP33 sounds and feels incredible. Its action is almost exactly like the Hallet, Davis, and Co. upright I have at home. I also use the Juno-6, as well as a Yamaha S90ES for a lot of our other sounds like flutes and harmonium. They stopped making that version of the S90 about two years ago, but I think it's just the best. The sounds are incredible, and the navigation and editing of patches is really easy. We also use a Minimoog Voyager, but our other keyboardist-slash-guitarist plays that one because there's no room for it on my side of the stage.

How do you approach finding your own unique sounds on the keyboard?

I think you need to look in lots of different places, from searching thrift stores for unusual instruments to being unafraid to mess with presets or have your piano sound a little out of tune. Each song is special and has to have its own sonic landscape. Every song should be its own little "ecosystem," and every sound plays a role in that.

What have you learned that might help readers hoping to have a career like yours?

I think first and foremost I've learned to be nice. You bump into a lot of people on the road, but the ones you want to work with over and over again are the nice ones. So be nice, respectful, and organized. I think that's a really important lesson to learn.

Also, tours and album cycles are long. So if you're not thrilled with the music you're playing every night, it can change your whole attitude. You have to put in the work beforehand to make sure you love the songs. Even when things weren't going so well business-wise, I was really proud of the music in both this band and my old band. That happens by putting care into every detail of your songs, and building them to last. It's about crafting parts that will stand up over time. I think musicians have to pursue perfection in craft just like, say, a chemist. You have to show up every day and push and push and never give up. I think that's true of each song, as well as a career in general. You should want a career that outlives you. And to do that, you can never be truly satisfied. ♫

Official video for "We Are Young" featuring Janelle Monáe.

keyboardmag.com/june2013

DIRTYPHONICS

BY LILY MOAYERI

"I AM DIRTY." THIS PROVOCATIVE LYRIC IS ALSO A LIFE AFFIRMATION FOR FRENCH electronic quartet Dirtyphonics. Spawned partially from the lead single, "Dirty" from the group's debut album, *Irreverence* (on Steve Aoki's Dim Mak label), the phrase encapsulates the sweaty, heaving beats and nasty bass lines that scaffold all Dirtyphonics' compositions. Forming in Paris in 2004, Pho, Charly, Pitchin, and Thomas take their cues as much from Metallica as they do from Daft Punk, creating sounds that appeal to a wide cross-section of the otherwise highly genre-divided electronic dance music spectrum—and to a surprising degree, to more old-school keyboard and synth music fans as well.

The album opens with a solo piano piece, "Prelude (White)," whose melody is picked up in the electronic track "Prelude (Black)." Who played it, and why have that on an otherwise aggressive electronic album?

Charly: We felt we not only wanted to speak to the youth, but also to make everyone understand that although we're working with machines and knobs, there are still musicians behind those machines and not just button pushers. We wrote "Prelude (Black)" first, and then we reached out to a friend of ours who's a well-trained pianist to see if she'd help us arrange and rewrite that same track as a classical-style piano piece.

What musical training, tastes, and influences do you have outside of EDM?

Pho: I played piano as a kid and guitar in bands. Charley also did guitar in metal and hardcore bands. Pitchin was playing bass. Thomas is the graphics guy.

Charly: It's awesome when you play in a band, but it also brings a lot of bull**** because it's a bunch of people playing together. You discover electronic music and its energy, you start playing with computers, you figure out you can make music by yourself and start doing that. Because we still were looking for that energy we had in our bands, drum 'n' bass made that bridge between electronic music and the energy of metal.

The metal influence is apparent on "Walk in the Fire."

Pho: We thought it would be fun to make an intro that sounds like what we wanted to do back in the day with guitars. Drum 'n' bass melding guitars with bass distortion and frequency modulation sounds.

THE SECRET TO POST-DUBSTEP SUCCESS? ROCK LIKE A METAL BAND, THINK LIKE A PIANIST!

Charly: It was important for us to incorporate our guitar recording into an electronic environment. We wanted the bass and guitar sounds playing at the same time to make room for one another so you have that balance of electronic and analog.

Pho: We wanted to get a Marshall amp for the guitar, but we didn't have time so we used Guitar Rig from [Native Instruments] Komplete. We also created bass sounds using the Ampeg SVT emulation. Most of the drums were made with Toontrack EZdrummer samples, which we like to use for kicks and snares. We tried for metal sounds in the intro and when it drops we came back to our regular sounds: kicks, snares, and distorted bass.

Throughout, your bass sounds have a grinding dubstep quality but with very complex harmonic modulations. How do you get your bass sounds?

Pho: The Korg MS-20 was our first hardware synthesizer, then the Access Virus TI, then the Novation UltraNova. Most of the frequency modulations you hear on the album are made with the Virus. That's the weapon we overuse but whenever you want a sound, it's really easy to make it. We use lots of hardware because we believe in happy accidents. Everything that goes on with machines can't happen when you're playing with a mouse and keyboard. We like the live approach, the knob approach, the playing approach.

Pitchin: We like to have the most energy we can have in our tracks and sound-wise. Compared to the Massive plug-in, the Virus sounds next-level.

Pho: We do have lots of FM. We use lots of different distortion plug-ins and layer, trying really different things on the basic sounds we have. The basic sounds are really simple waveforms. We always start with a square wave, then triple and quadruple it. It makes the song thick.

Charly: What's cool about this is that you find out what's going to go together, so the sound moves within itself and doesn't always repeat the same way. It's alive when you're playing it. There's that feeling that it's not a machine because it's evolving throughout the whole track.

On "Los Angeles," the slower, trap-like beat alternates with a faster, almost ska rhythm. Many EDM songs, by contrast, are the same beat and tempo all the way through . . .

Pho: When that track breaks down, it's like when a rock drummer is playing no kicks, just the snare, and everybody gets into the rhythm of that. We wanted to keep that and then when it dropped with the kick, maybe four bars right after, create a kind of tension throughout all that period. That's a little rock 'n' roll trick.

Charly: Tempo changes are something you can find throughout the whole album. That's our signature because we love drum 'n' bass, we love dubstep, we love 110 bpm, and it's really important for us to keep the same theme throughout our songs, but to switch tempos to keep it interesting for five minutes. You can find the same thing in metal and hardcore music. Metal songs routinely go to half time or double time and it's interesting to incorporate that into electronic music.

What synths were used to create the sounds on the breaks and turnarounds of tracks like "Dirty?"

Pho: Most of our analog synths are mono, like the Korg MS-20 or Roland SH-101. Usually when we use analog it's for mono synth sounds. When we do pads or organs, we use samplers or emulations. However, the Oberheim OB-8 is marvelous for those kinds of sounds. You can go way beyond what plug-ins do and it's really enjoyable to press "record" and not record MIDI, not record something that you're going to change—just record something that's going to be "filtered" by your hand and when all that is done, it doesn't move, and you got your part!

Are you using more hardware than virtual gear?

Pho: We use both worlds. For creation we like to be outside the virtual world, which isn't as fun as the hardware world. When it comes to mixing and mastering and we're working more on the details, we'll use plug-ins. We still use EQ on every audio channel in Cubase, and Waves compressors—their limiter is really good.

How is everything translated live?

Pitchin: Charly and I are from the DJ basis so we're with two [Pioneer] CDJ-2000s each and a Pioneer Nexus 900 mixer. Pho and Thomas are bashing pad machines. We have Native Instruments Maschine and Korg Kaoss pads doing bass and lead sounds plugged into a Mackie mixer, which goes to the main DJ mixer. We're playing all our own tracks and can control and play individual notes in our tracks. It makes it really fun because we can change it if we want.

Charly: In the studio we chop up all the parts and assign those parts to Maschine so that gives us total control over whatever's being played at any single moment. When we're playing songs from other producers, the guys on Maschine are going to tease something from Beastie Boys or Metallica on top of it. Live, it's always the four of us playing all together. ♫

HERE COME THE MUMMIES
Cryptic

If Tower of Power and Oingo Boingo were exploring an ancient tomb, unleashed a curse that turned them all into mummies, and in their undead state forgot that they were two separate bands, the result would sound something like this. HCTM appears in public only as mummies, in part to mask their rumored identities as A-list session players. We can believe it—the precision with which they arrange and perform originals ranging from horn-driven funk to ska to groove-forward party rock (most with hilariously R-rated lyrical themes, take note) is proof that every member of this 12-piece ensemble is indeed a master of his craft. *Cryptic* is surely the most fun you'll have this summer with your wrappings on. | herecomethemummies.com | STEPHEN FORTNER

LETTUCE
Fly

Lettuce is a seven-piece horn-drenched band featuring Soulive's organist Neal Evans, who mans the B-3 like a race car on this wild slab of funk and soul. Recorded to analog, this music sounds timeless from the first listen. The band pushes the bar on big arrangements, syncopated rhythms and tight changes, from the dub funk of the title song through more upbeat fare like "Madison Square." Though Evans has standout moments, Lettuce truly works as one cohesive organism, ready to attack the dance floor and make everybody sweat. Tasteful and worthy music. | lettucefunk.com | ROBBIE GENNET

MATCHBOX TWENTY
North

Matchbox Twenty took ten years off between studio albums, but on their new release *North*, Rob Thomas and company bring back the big-radio riffs that catapulted them into the stratosphere in the first place. Kudos to the band and producer Matt Serletic for making the *songs* the real stars here. "Parade" draws you in from the very first lick, "Overjoyed" brims with small town grace, and if there's a more infectious track than "She's So Mean" on radios and iDevices of late, this reviewer has yet to hear it. Recommended. | matchboxtwenty.com | JON REGEN

BILLY MARTIN AND WIL BLADES
Shimmy

This grooving organ duo is comprised of drummer Billy Martin (Medeski, Martin & Wood) and San Francisco Bay Area keyboardist Wil Blades. *Downbeat*'s critics poll voted Blades "Rising Star" on organ in 2007 and 2008 and they certainly had foresight. Blades is a natural, with a nice touch on the drawbars and crackling energy on upbeat tunes like the Eddie Harris cover "Mean Greens." He even throws down a mean Clavinet solo on the gritty "Deep in a Fried Pickle." If you dig real Hammond and funky grooves, you can't go wrong with *Shimmy*. | wilblades.com | ROBBIE GENNET

JOE GILMAN
Relativity

Dave Brubeck once called Joe Gilman "one of the greatest pianists I've ever heard." One listen to Gilman's new CD *Relativity* and you'll understand why. The album, which finds Gilman composing new works inspired by the visual art of M.C. Escher, is a sonic celebration of color and contrast. Gilman swings with abandon on the driving opener "Three Spheres," delivering a piano solo that brims with both invention and drive. Other album delights include the plaintive "Three Worlds," and the outright burner "Smaller and Smaller." | joegilman.com | JON REGEN

VARIOUS ARTISTS
Reggae Golden Jubilee

This boxed set is a towering testament to the enduring power of reggae. It's curated by former Jamaican Prime Minister Edward Seaga, who tracks the lineage from the beginning of the genre onward. We hear keyboards prominently at every phase, from early tracks built on acoustic piano to the Hammond organ, Clavinet, and synths we know so well. Aside from ubiquitous artists like Bob Marley and Jimmy Cliff, there's a wealth of lesser-known artists to discover. Four CDs give us too many to list, but suffice to say they chose well! | vpreggae.com | ROBBIE GENNET

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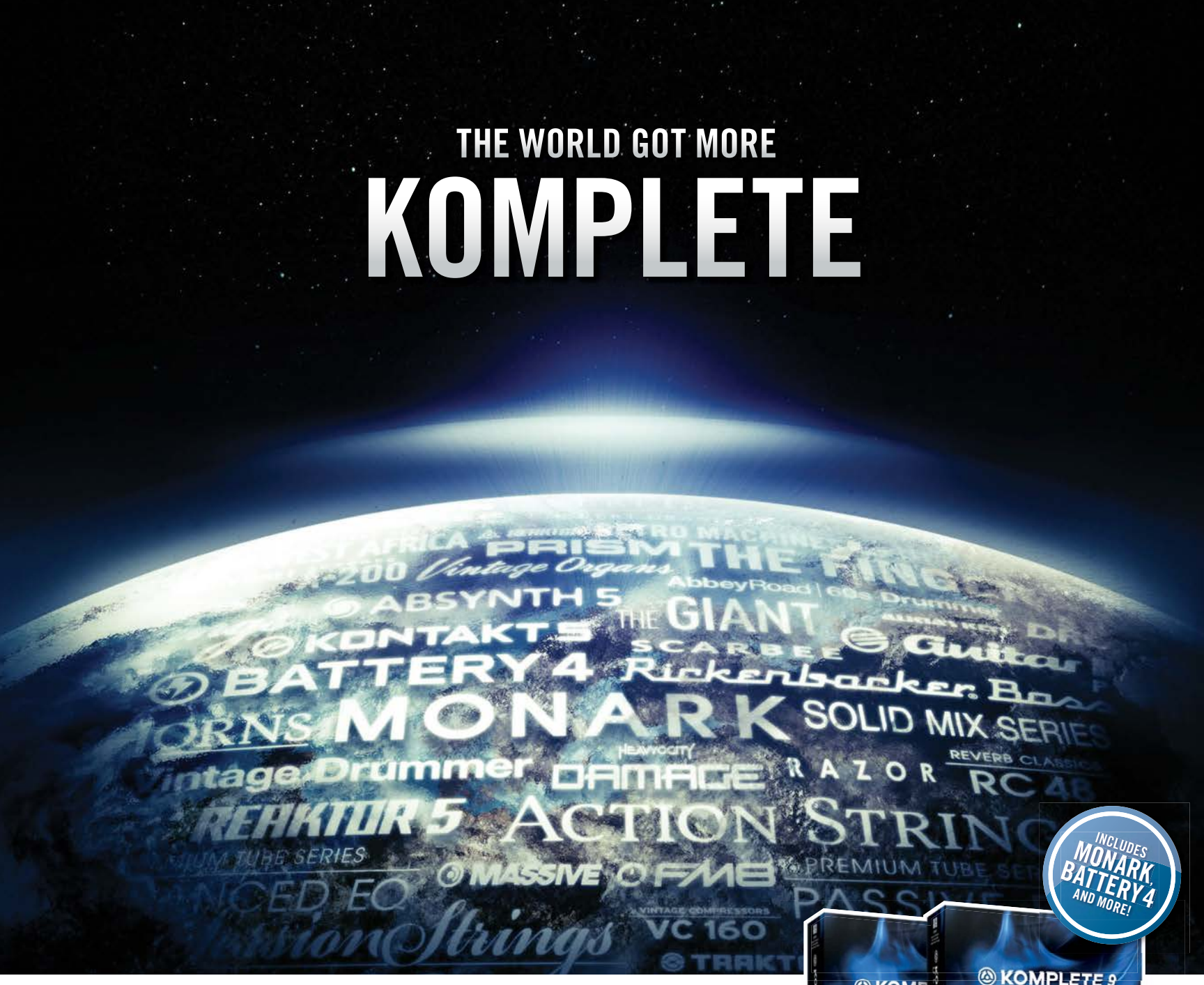

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Left Hand Workout

BY TONY DESARE

AS JAZZ PIANISTS WE OFTEN LEARN A MULTITUDE OF RIGHT-HAND LICKS and scales for soloing, but we don't spend enough time developing our left hand. Since I sing and often support my vocals with solo piano, I've spent a lot of time practicing left-hand devices that offer musical intrigue while helping to deliver my vocal more effectively. Developing a strong left hand is great for building hand independence, not to mention entertaining crowds. In this lesson, I'll be using short excerpts from the jazz standard "Autumn Leaves" to demonstrate useful left-hand devices. The song's harmonic movement is based on the circle of fifths and is a perfect vehicle for learning to play in many keys. Try playing the patterns in the left hand while playing different rhythms with the right hand. Start by playing *quarter notes* with the right hand, and then move on to *eighth notes*, *triplets* and other rhythms.

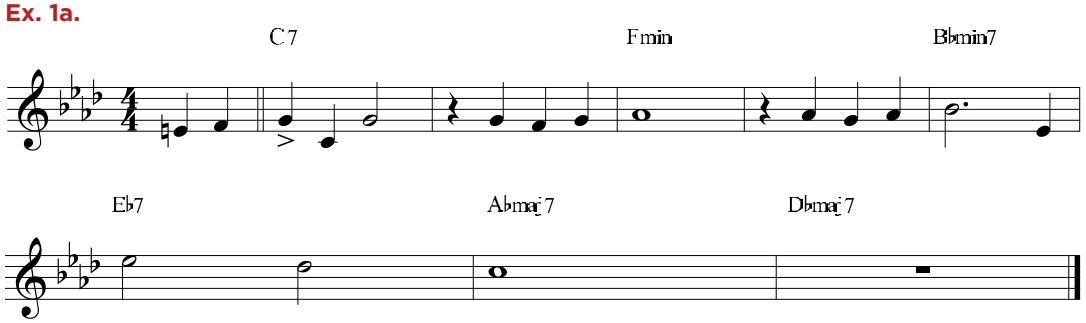
Listening List

Check out the left-hand technique of these great pianists.

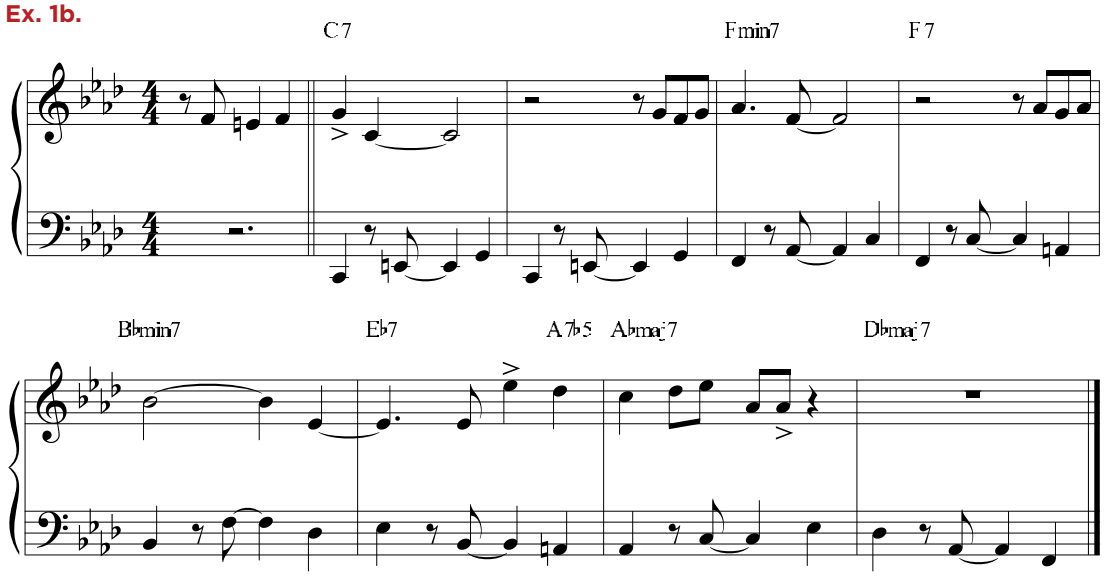
OSCAR PETERSON
Solo

JAMES BOOKER
Spiders on the Keys

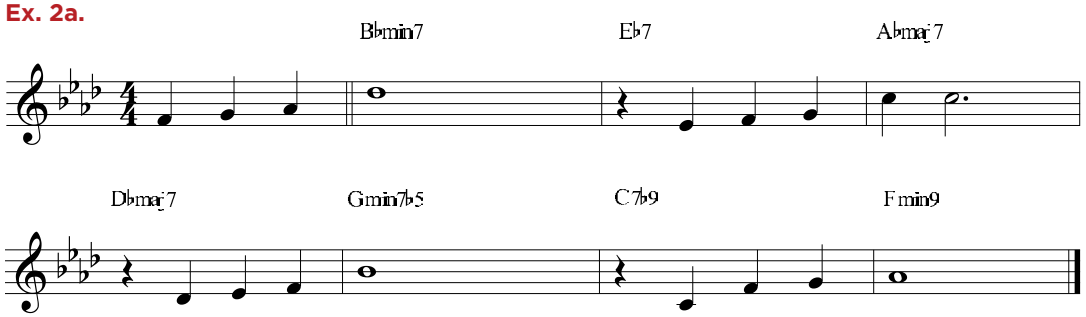
Ex. 1a.



Ex. 1b.



Ex. 2a.



Ex. 2b.

1. Left Hand Like James Booker

In **Ex. 1a**, I've outlined the basic chords and melody for the eight bars of the *B* section of "Autumn Leaves" in the key of *A♭*. (*A♭* might seem strange for this song, but I find that the notes fall under the fingers well, especially at fast tempos). **Ex. 1b** imparts a different flavor to the same melody, employing a left-hand Afro-Cuban rhythm similar to what famed New Orleans pianist James Booker might have used. This syncopated rhythm outlines the chord triads and can help you achieve greater independence between the right and left hands.

2. Driving Left Hand

Ex. 2a illustrates the basic melody for the opening eight bars. **Ex. 2b** is an elaboration on the rhythm we established in Ex. 1b, and a modified version of another pattern James Booker often played. Notice how the fifth and sixth notes of the pattern are broken up instead of striking the third and seventh degrees of the chord at the same time. This allows for smoother transitions between chords, and also lets you play the pattern at much faster tempos. In this context, the left hand pattern takes on an almost classical feel while it simultaneously "holds down the fort," allowing the right hand to serve functions like outlining the melody, soloing, or adding flourishes that accent the driving left-hand rhythms.

Watch Tony play his original song "A Lot To Say."

Download a transcription of the piano solo.

Play-along audio examples.

keyboardmag.com/june2013

Ex. 3.

Ex. 4.

3. Double-Time Stride

Ex. 3 uses the harmonic footprint of the opening to create a double-time stride pattern for the left hand. Notice how the bass line is often moving in thirds rather than fifths. This was inspired by Oscar Peterson's solo piano work from the 1970s. His ability to play stride piano extremely fast always amazed me. The best way to play in that style is to make the movement of the left hand as efficient as possible.

MARC MCANDREWS

Relax—Don't Do It

"Make sure to keep your left hand relaxed and rubbery when playing these patterns, otherwise you'll get tired very quickly," says singer, pianist and composer **Tony DeSare**. "Don't let the fact that your hand is moving fast make you hit the keys harder." Tony has appeared on the *CBS Early Show* and *A Prairie Home Companion*, tours the world with symphony orchestras, and performs at clubs with his own trio. Find out more at tonydesare.com.

4. Double-Time Boogie *a la* Oscar

Ex. 4 illustrates a standard boogie-woogie pattern, but with the tempo doubled and played "straight" in the style of Oscar Peterson. This is a really fun device for creating excitement live. Feel free to experiment with your own runs in the right hand—the important thing is to keep that left hand solid and rocking!

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Hand Independence for Synth Players

BY DANIEL MINTSERIS

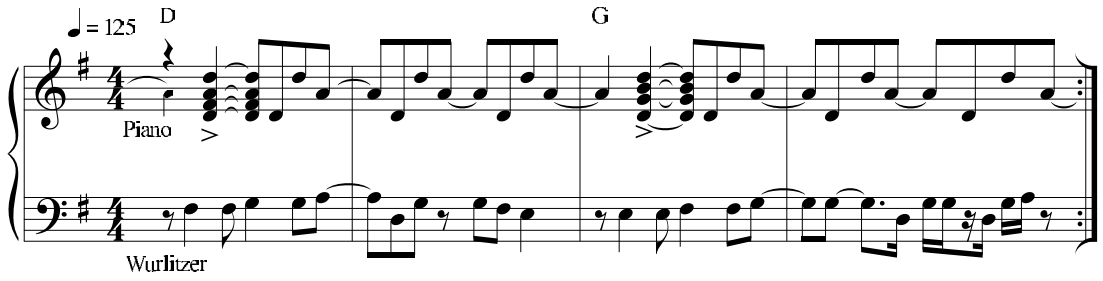
IT'S OFTEN THE KEYBOARD PLAYER'S JOB TO RECREATE COMPLEX STUDIO SOUNDS ONSTAGE. REVERBED PIZZICATO strings, portamento synths, and distorted Mellotron all sound amazing together, but how does one person with two hands *play* all of it? I do my best to avoid the obvious solutions, like omitting a part or using pre-recorded backing tracks. After I transcribe the parts, find a workable keyboard split and get each sound just right, it often turns out that I can actually play it all—but this takes practice and developing your hand independence.

Like with all hand independence exercises, start with isolating each hand. Next, begin combining the parts so they form a single interlocking mechanism, paying attention to which notes or chords from each hand are played at the same time versus which lead into each other. Once the passage makes sense as a whole, set your metronome to a slow tempo that gets you through the exercise without stopping, and work up from there. Soon, your muscle memory will start taking over and you'll be able to focus on feel and articulation for each part.

1. Piano Ostinatos and Wurlitzer Lines

On Teddy Thompson's *A Piece Of What You Need* tour, it fell to me to translate Marius DeVries' elaborate production onto the stage. **Ex. 1** is reminiscent of a musical situation from that time, with piano ostinatos and chord hits in the right hand and a Wurlitzer line in the left hand. Ostinato rhythm figures are a common feature in pop music of every kind, so the skill of playing a more complex counterpoint line against them is highly useful.

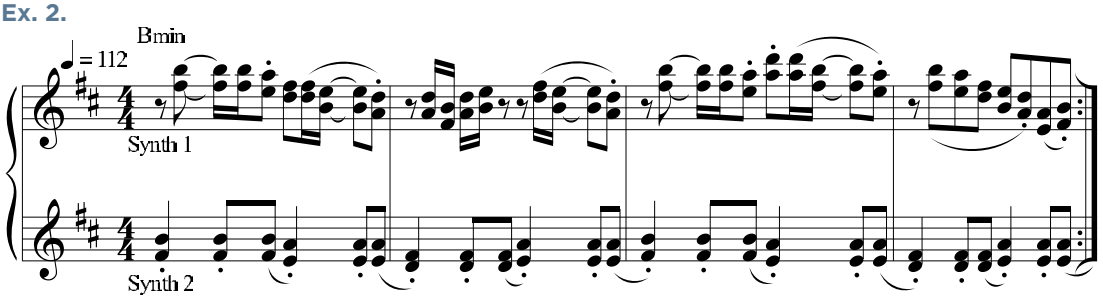
Ex. 1.



2. Synth Meets Guitar

During the David Byrne and St. Vincent *Love This Giant* tour, I played what was originally a guitar part with my left hand and a synth counterpoint with my right. **Ex. 2** demonstrates how to pull off a similar sonic feat. Here, *articulation* is the beast: Identify the spots where one hand plays staccato against the other hand's tied or legato notes. Loop the pattern, lock into the groove, and work on getting the articulation exactly right. Imagine you're playing it along with a horn section. Once it feels like second nature, try improvising your own syncopated licks while keeping the left hand going.

Ex. 2.



Ex. 3.

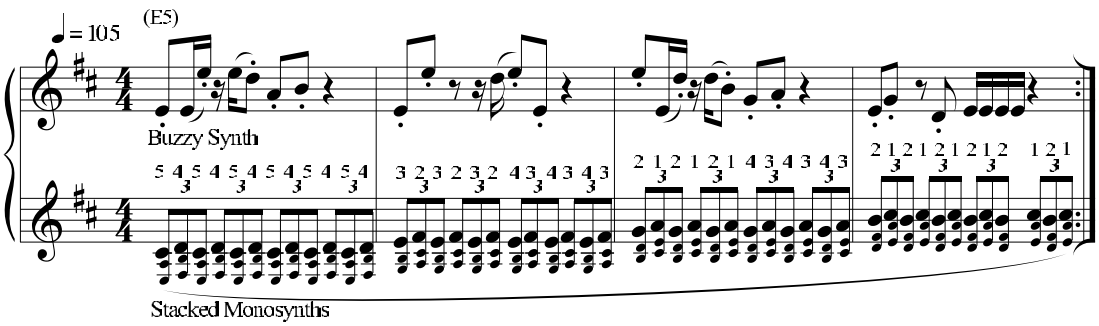
3. Bass and Rolled Chords

Ex. 3 illustrates a steady left hand bass figure supporting laid back "push and pull" phrasing in the right hand. I used this approach during Marianne Faithfull's semi-acoustic "Songs of Innocence and Experience" tour. The right hand's rolled chords provide the harmonic foundation as well as bluesy, ornamented fills. The sustain pedal would've been convenient here, but we can't use it because of the pointy bass notes. Quarter-note quadruplets in 6/8 time is a popular polyrhythm that's good to practice, but beyond that it's most important to focus on a free, unhurried delivery in the right hand. See how loosely you can phrase these licks (or some of your own), without compromising the steady lilt in the bass.

4. Multi-Synth Harmonies

On St. Vincent's *Strange Mercy* tour, I literally had my hands full. She's known for her use of layered, orchestral-style parts and jagged syncopated lines, and they often occur all at the same time! **Ex. 4** demonstrates some of the techniques I used with her. To achieve three-part harmony with portamento-infused monophonic synths, I created three instances of Arturia Minimoog V in Ableton Live and set up each note of the scale in the top voice to be sent to all three synths, with the second and third voice transposed down accordingly. I then used a slightly modified Ableton Operator sound in an upper split zone to play the right hand line. Notice that clefs and notated octave placement are somewhat arbitrary in cases like this. I'll often have a higher-pitched sound in the left hand (or vice versa) just because I like how a particular part feels there.

Ex. 4.



Break Out Those Splits

"While you can practice the first three examples on a piano, Examples 4 and 5 will require keyboard zoning and more specific sounds to be performed live," advises keyboardist and composer **Daniel Mintseris**, who has performed with David Byrne, St. Vincent, Teddy Thompson, Peter Cincotti, Renée Fleming, Marianne Faithfull, and Martha Wainwright. His experimental album with cellist Dave Eggar is called *Convolutions for Piano, Cello, and Electronics*. Find out more at mindlessinertia.com.

Watch Daniel apply these techniques with St. Vincent on the song "Surgeon."

SOUNDCLOUD

Play along with the audio examples from this lesson.

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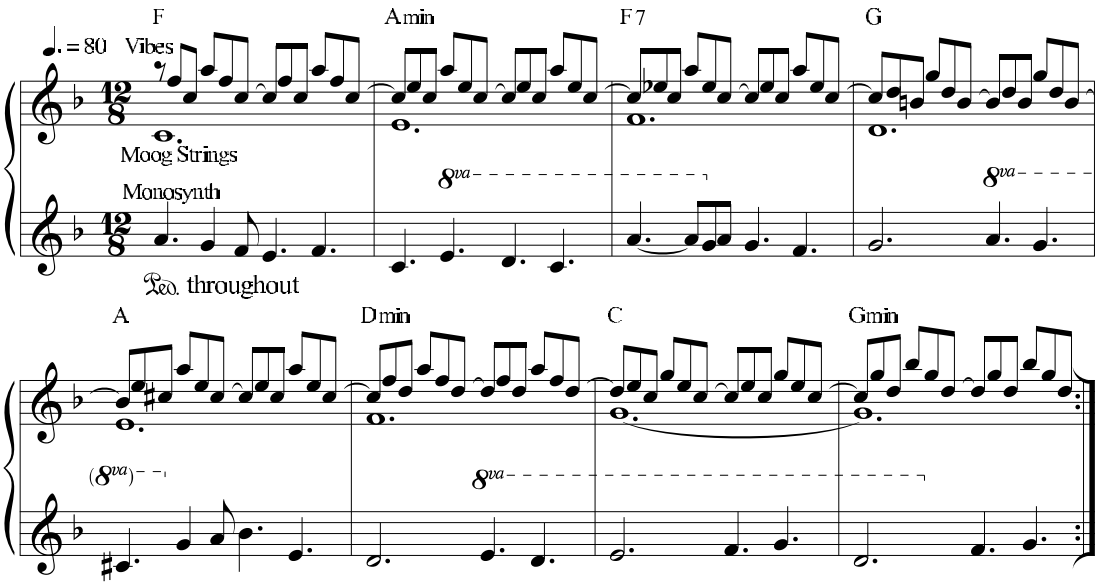
5. Both Hands, Both Feet

At a recent show with singer-songwriter Bess Rogers, I played a song that required both hands and both feet. **Ex. 5** illustrates how to pull this off. Start by dividing your keyboard into three zones that fit each part's range. The top zone can be a long bell or electric piano sound—here I used high-register Mellotron vibes with rapid tremolo. The middle zone is for the "woozy" synth string sound, and the bottom is for the smooth Moog lead with glide. We'll need the sustain pedal to stay pressed down throughout, so either filter out the sustain controller for the top zone or reduce polyphony to allow for continuous sustain. Finally, in the lower zone, assign a pedal to switch octaves as indicated. If this isn't possible with your setup, your left hand will have to work a little harder to make those octave jumps (or hit octave shift buttons).

Ex. 5.



Listening List

TEDDY THOMPSON
A Piece of What You Need

DAVID BYRNE and ST. VINCENT
Love This Giant

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5 (MORE) WAYS TO PLAY LIKE Keith Emerson

BY BRIAN CHARETTE

KEITH EMERSON IS THE REASON I PLAY KEYBOARDS. WHEN I FIRST STARTED playing music, someone gave me a cassette of Emerson, Lake & Palmer's album *Brain Salad Surgery* and my life was changed forever. Emerson is undoubtedly one of the most influential keyboardists of the last 50 years. Here are a few exercises to give you a taste of his dizzyingly diverse keyboard style.

1. Organized

Ex. 1 illustrates some of Keith's killer organ work. Bar 1 begins with a descending bass line and Lydian arpeggios moving in minor thirds. By bar 4 we see another typical Emerson device: triadic shapes over unusual bass lines moving in parallel. The example ends with rhythmic prog hits. Emerson played mostly Hammond C-3 and L-100 organs, but regardless of your organ rig, set your top manual to "888" (just the first three drawbars, all at maximum) with percussion on short decay and vibrato/chorus set to C3. Set the bottom manual to *00 8800 000*. Check out ELP's track "Endless Enigma" for an example of how Keith employs these techniques.

2. Five Alive

Emerson routinely sets up ostinato riffs in his compositions. **Ex. 2** is influenced by the ELP tune "Trilogy" and is in 5/4 time. Often after a long cadenza, Emerson plays four bars of a vamp similar to this one before drummer Alan Palmer enters with fervent force.

3. Mano y Mono

Another sound associated with Keith Emerson is the monophonic Moog synthesizer. Keith would often play sweeping modal lines with a fat monophonic sound employing crazy amounts of pitch-bend and portamento, as in **Ex. 3**. This example uses the Mixolydian mode (major scale with a flatted seventh). When you get to bar 3, channel your inner prog rock star and turn that modulation wheel up.

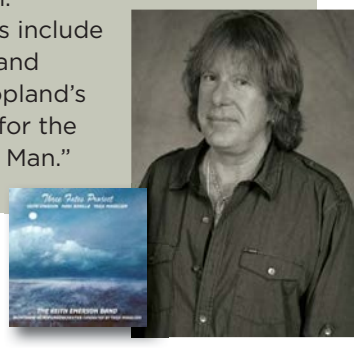
4. From Rags to Riches

Emerson loved ragtime-esqe piano parts and often used an out-of-tune piano for tracks featuring them, like on "Benny Was a Bouncer" and "The Sheriff." **Ex. 4** approximates this style. Here the left hand plays a standard ragtime accompaniment while the right hand plays melodies voiced in sixths and other unusual intervals. The exercise ends with a right hand fugue-like line.

5. Go Fourth

Emerson often employs fourths in his melodic lines. The notes in **Ex. 5** all come from the *C* Dorian mode. In your own melodic explorations, instead of playing the mode simply straight up and down, try to "see" it in fourth shapes. The ELP albums *Brain Salad Surgery* and *Trilogy* both feature extensive use of fourths.

The Keith Emerson Band's latest album, the *Three Fates Project*, out now on the Varese Sarabande label, features Emerson and guitarist Marc Bonilla reimagining classic material with a 70-piece orchestra conducted by world-reknowned maestro Terje Mikkelsen. Highlights include "Tarkus" and Aaron Copland's "Fanfare for the Common Man."



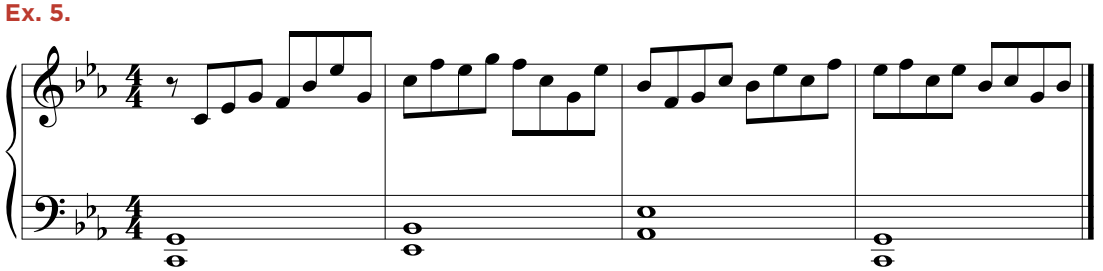
Ex. 1.

Ex. 2.

Ex. 3.

Ex. 4.

Ex. 5.

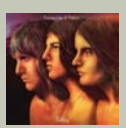


Brian Charette has performed and recorded with Joni Mitchell, Lou Donaldson, Bucky Pizzarelli, Michael Bublé, and Rufus Wainwright in addition to leading his own jazz groups. His latest album is *Music for Organ Sextette*, on SteepleChase Records. Find out more at kungfugue.com.

NILS WINTHER

Listening List

EMERSON, LAKE & PALMER *Brain Salad Surgery*



EMERSON, LAKE & PALMER *Trilogy*

Read our most recent interview with Keith Emerson and that issue's "5 Ways" lesson.

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Play along with Brian on audio examples from this lesson.

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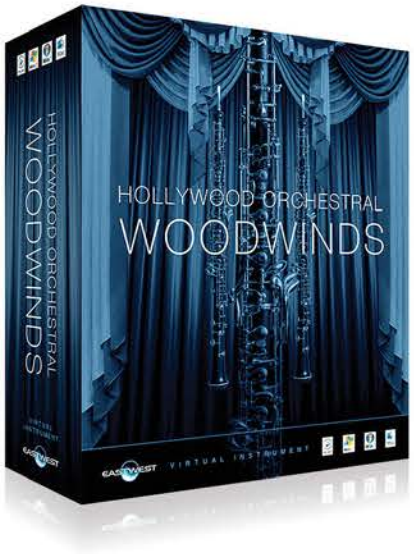

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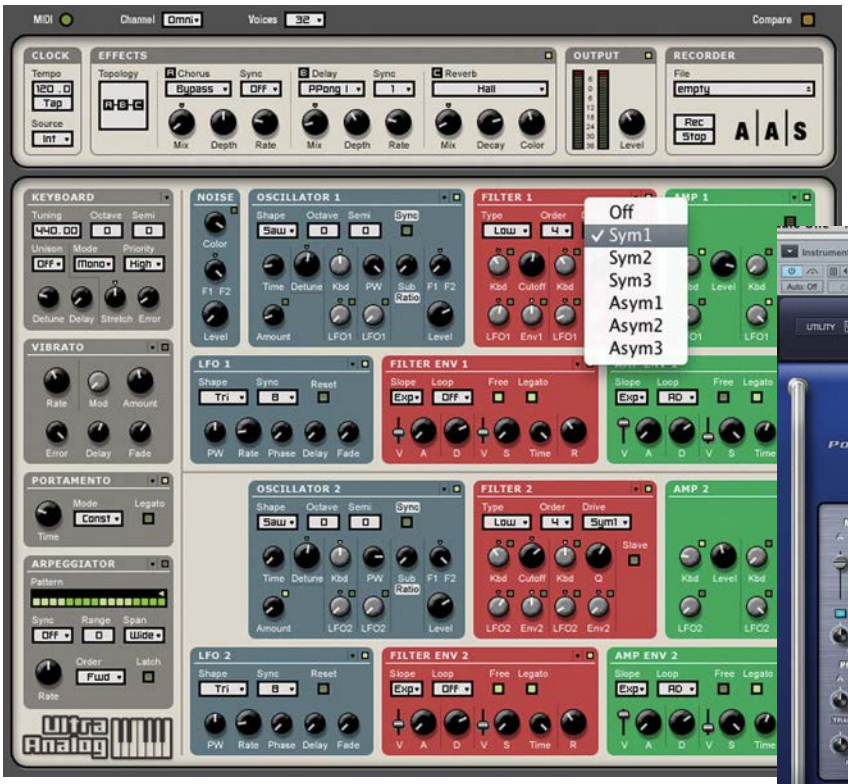


Fig. 1. Applied Acoustic Systems' Ultra Analog offers a variety of filter overdrive types.

Fig. 2. Spectrasonics Omnisphere also provides an abundance of filter types and characteristics.

THE ART OF SYNTH SOLOING

A Little Rough Around the Edges, Please!

BY JERRY KOVARSKY

BACK IN THE APRIL COLUMN, I LEFT YOU WITH A LEAD SOUND THAT FADED into harmonics via a controller, and said we were on our way to emulating classic guitar feedback. Let's continue with that exploration. The logical next step is to dirty up the sound a bit—but not too much—to bring our synth playing closer to the role that distorted lead guitar has played in music for decades.

Ground Rules

These are deep waters we're entering, and guitar players can and do go on ad nauseam about the nuances of distortion. I only want to dip our toes in, so the ground rules for this month are:

We want a subtler addition to our tone. All-out fuzz and over-the-top grind are cool, but they tend to take over your sound and playing. Such sounds usually are the product of hard clipping, where the tops of the waveform have been flattened out severely. It doesn't much matter what waveform you feed into these types of sounds, the distortion itself becomes the tonality, and your sound gives up most of its character to this effect. Also, it becomes difficult to play faster lines with any distinction, and forget about playing higher up on the keyboard, as the aliasing and intermodulation distortion (especially when pitch-bending) becomes pretty nasty. Check out the online audio clips to hear what I'm talking about.

Our "dirt" should respond to our playing dynamics. In guitar terms, overdrive is the even harmonic-based sound of an amp that clips in a

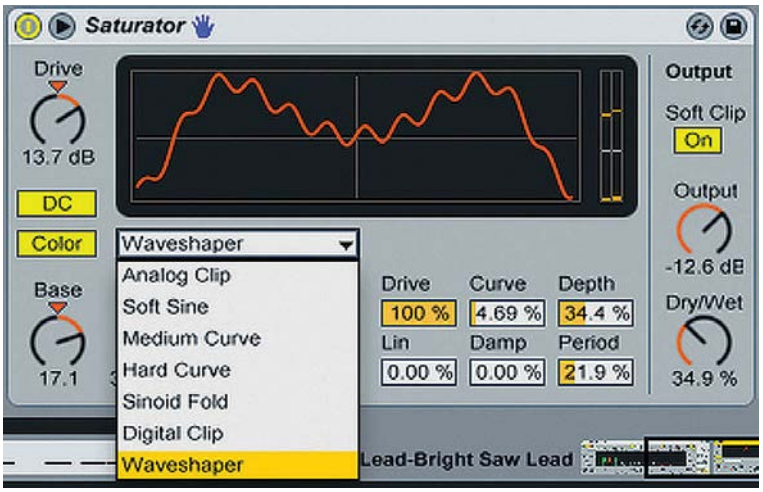


Fig. 3. Ableton Live's Saturator includes a waveshaping mode.

Fig. 4. Logic's Distortion plug-in offers basic input and output gain staging, plus a tone control.

gentle, rounded fashion, called soft clipping. The tops of the waveform are altered but not completely flattened. When this happens dynamically, the softer playing is not changed (as much) and the clipping increases as you feed the effect a stronger signal. This soft clipping adds some edge to your sound without taking over. For a synth lead you often don't want your sound itself to have too much dynamic range, as you can get lost in the mix while soloing. So we don't need the amp or filter to respond significantly to velocity. But by making your *effects* respond to velocity you get to control your overdrive dynamically, getting dirtier as you dig in harder.

Just a Little Edge

Before we go to effects, there are some synthesis-based ways to give our sound a little attitude. See if your synth has any controls for boosting the signal going into the filter, or a feedback loop, or a filter drive parameter. Logic's ES2, U-he Zebra 2, Applied Acoustics Ultra Analog (see **Figure 1**), Reason's Thor, and many other software (and hardware) synths have this feature. Other synths may offer a filter type that already models some amount of saturation or drive. **Figure 2** shows the many choices available in Omnisphere. Can the parameter be a modulation target? If so, use velocity to increase the depth or intensity of the effect.

Does your synth have an external audio input? If so, try routing an output from the synth back into itself. On a hardware synth, try using the headphone output (this won't work on synths where plugging in headphones mutes the main outs and there's no way to override this behavior). For a soft synth, you can set up a bus output in your host software, which you can then feed back into the synth's input. This is a classic technique that I first learned from Jan Hammer's work, where he connected the low output of his Minimoog back into the external input and set the level to clip just slightly. This fattened up the sound nicely, and is now even documented in the manuals for most Moog synths.

Waveshaping can also add some edge to a sound, but you need to use it very sparingly and find a shape or preset that's not too over the top. Some classic hardware synths like Korg's O1/W and Prophecy offered it as part of their voice, as do Cakewalk Z3ta+ 2 and Spectrasonics Omnisphere; today's Korg Kronos, Propellerhead Reason, Ableton Live (see **Figure 3**), and many others offer it as an effect type. Whenever possible, set up velocity to modulate the depth of this drive/waveshaping.

Digging in the Dirt

There are two approaches to adding effects for overdrive/distortion: using a dedicated effect (including models of classic effects pedals), or using a complete guitar amp modeling setup such as a Line 6 Pod or IK Multimedia's AmpliTube software. While both can produce wonderful results, I recommend you start with the dedicated effect for synth leads. Why? Many guitar amp models include speaker/cabinet emulations, and these roll off frequencies and color the sound based on the frequency range of a guitar, not the full-range output of a synthesizer.

To produce overdrive or distortion, the input to an amplifying device was overloaded, producing additional harmonics and color. Most effects emulate this by having an input gain control and another output level control to compensate for the increase in volume that occurs as you raise the input level. Note that the input control may be labeled as drive, gain, overdrive, crunch, fuzz, or other things besides "input gain." Not to worry. **Figure 4** show this in Logic's very basic Overdrive effect. The basic idea is: The more you increase the input gain stage, the more you'll want to decrease the output stage. We want more "attitude" for our sound when we kick it in, not more volume.

So look through your synth or soft synth or DAW and find the category of distortion, or overdrive effects. Pick something as an insert effect in your synth or DAW. If it has presets, take a tour through them. As you call up the presets, examine how they've set the controls, paying close attention to the amount of gain or effect being introduced at the front of the signal chain. This is the critical input overload stage that we want to set to taste, not going so far as to fuzz out our playing.

If you find that the effect is drastically changing the thickness and tonality of your sound, look to see if it includes some form of speaker simulation and turn that off. If that doesn't help, you should set it up on a bus in your DAW, or as a master effect in your synth, so you can blend the wet/dry mix via the send level to your bus, or the level of the bus return. This way you can add a little of the effect's sizzle without sacrificing all the frequencies of your original sound. With this routing I can use the most aggressive, high-gain effect and tame it to my needs, and even accept the results of an included speaker simulation. Finally, if at all possible, set the master effect's wet/dry mix, send, or bus return to be modulated by velocity so your fingers can interact a bit with the amount of overdrive added. In a DAW this may need to be done via automation, not just MIDI learn. As always, experiment and enjoy! ♫

SOUNDCLOUD Original audio examples.

keyboardmag.com/june2013

Set Phasers on Fabulous

RECREATING VINTAGE ANALOG EFFECTS

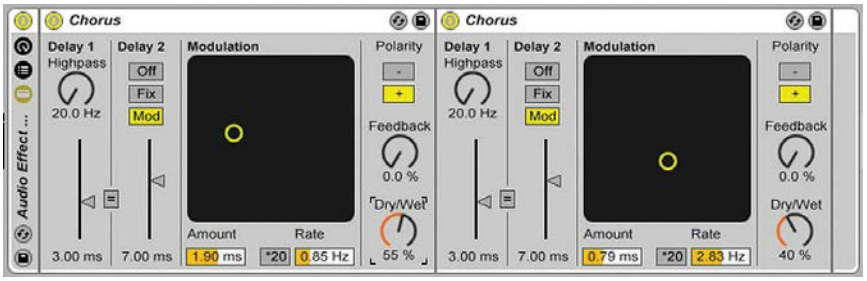
BY FRANCIS PRÈVE

HAVING A NOTE-PERFECT RECREATION OF AN ANALOG EFFECT GEM IN YOUR ARSENAL IS ONLY THE FIRST STEP toward nailing the Indie and NuDisco genres of electronic dance music. If you really want accuracy in emulating the' 70s and '80s sounds that dominate the style, you'll need to familiarize yourself with the effects processing of that era.

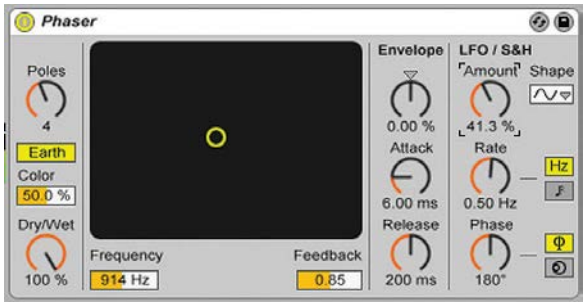
Many virtual vintage synths include some top-notch analog-style processing, but for those that don't—or if you want to simply add some retro spice to your other synths—there are some nifty tricks you can do with the effects devices that come standard with every DAW. You just have to familiarize yourself with the stock tools from those days, which by today's standards are rather limited.

So this month, we'll take a look at a few classic effects, along with some practical applications for using them in your retronica productions.

Effect Type 1: Chorus/Ensemble

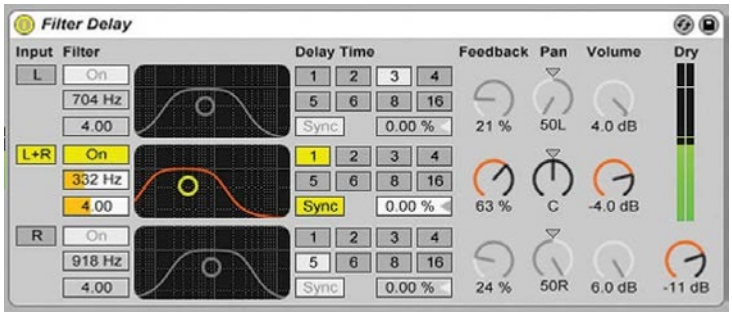


The gold standard for vintage ensemble effects were those included in ARP's legendary string synths. Unlike a standard chorus, the "ensemble" effect has a warmer, more watery sound that's great for thickening pads as well as emulating analog strings. According to legend, the character of the ARP ensemble sound was created via three analog delays being modulated by two LFOs, each with different rates, amounts, and phase offsets. Knowing that, recreating the sound is quite simple. You run two or three chorus effects in series, and then make slight adjustments to the rate and depth for each, followed by a few tweaks to their wet/dry amounts. From there, you can run single-oscillator patches into the effect for classic sounds, reminiscent of the Korg Polysix and Roland Juno-60.



Effect Type 2: Phasers

While phasers sound great on string machines and sawtooth pads, they're also the secret sauce for warming up Fender Rhodes electric piano emulations—especially if you're going for that jazz-inflected Steely Dan sound. The secret here is to use slow rates and gentle depths. You want to add swirl and motion in a subtle way to get the full effect too much and it starts to sound like a mutant Leslie.



Effect Type 3: Analog Delay

Many of the sixteenth-note riffs that dominated early electronic tracks from Giorgio Moroder and Kraftwerk—the fathers of modern dance music—were actually sequenced *eighth-note* riffs, followed by an old-school analog (or sometimes tape) delay giving the impression of faster note subdivisions. Two telltale aspects of an analog delay are a mushy, filtered character for the echo and a straight-up monophonic sound. Ableton Live's Filter Delay does a great job of recreating that effect. All you have to do is turn off the stereo channels and band-limit the EQ of the center delay, focusing on the lower mids, then set the delay time according to your production needs. ♫

SOUNDCLOUD

Audio examples of each of these effect types in action.

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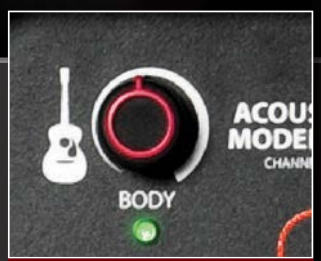

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DAVIS MULLER INSTRUMENTS

KeyB Solo

BY TONY ORANT

FOR THE GIGGING ORGAN PLAYER, THE CHOICES FOR A TOP-SHELF CLONE-wheel organ are better than ever. The instruments currently available from Hammond, Nord, Studiologic, and Crumar are all pretty phenomenal, with each model giving the concept their own (dare we say it) spin. With many workstations now including a dedicated organ engine (*e.g.*, Korg Kronos, Kurzweil PC3 series, and Roland Jupiter-50/80), it can take something special to motivate you to bring an extra one-trick pony to the gig. The KeyB Solo has that something special, for days.

Overview

The KeyB Solo is a single-manual drawbar organ that does nothing but tonewheel and rotary: There are no transistor organs, pianos or electric pianos, or other sounds. Of all the clonewheels I've ever owned (and there have been many), this really comes the closest I've ever been to both the sonic and tactile playing experience without actually carrying a full console or chop along with a Leslie 122 speaker—or Hammond's five-figure New B-3 Portable.

The irony is that musicians begged to get that sound from something that doesn't require a moving van and a chiropractor on call, we got what we wanted, and now we play drawbar organs that are usually even smaller than the typical synth workstation. You're just not as cool as Jon Lord when you're sitting at a slab that feels like it might launch off your stand if you key-slap too heartily. The KeyB, by contrast, is begging you to abuse it a little. The player doesn't dwarf the instrument, and though it weighs only 33

Snap Judgment

PROS Great organ sound. Outstanding Leslie simulation. Controls will make any tonewheel organist feel instantly at home. Light weight for such a robust build. Flat top for stacking other keyboards.

CONS Tuning, percussion volume, and decay knobs are on the rear panel. Direct output bypasses the reverb and overdrive, not just the Leslie simulator.

The KeyB Solo has an 11-pin Leslie connector, a mono direct out to feed an external preamp or rotary speaker that takes a 1/4″ input, as well as stereo 1/4″ outputs.

pounds, the organ has some girth and is built like a tank; you won't look or feel foolish doing windmill chops. The wooden end blocks, black metal chassis, and retro rocker switches give the whole instrument a retro, elegant, and sexy look.

Controls

The first thing you notice when you sit down at the KeyB Solo is that everything is where it should be relative to a vintage B-3. There are two sets of drawbars plus the two pedal drawbars centered above the keyboard for easy reach of either manual's drawbars by either hand; you can switch the whole keyboard between the two drawbar sets or use them for an upper/lower split. In the left corner are two bone-colored, square rocker switches with rounded edges, just like on the real thing, for vibrato/chorus (on/off for each manual) and the large clicky knob for the familiar six vibrato/chorus settings.

In the upper right corner, four more rockers duplicate the harmonic percussion functions of the B-3; left to right, they control on/off, soft/normal volume, fast/slow decay, and second or third harmonic. To the left of these, three more switches couple the pedals to the lowest 25 keys, toggle the keyboard split, and shift the lower manual's part up one octave—useful for comping chords in a musically pleasing range without having to rework the drawbar settings an octave higher.

Left of the drawbars are knobs for bass, treble, key click, crosstalk, volume, reverb, and overdrive. On the left cheek block is an authentic "half-moon" rotary switch with slow, brake, and fast settings. A headphone jack is conveniently placed at the left end of the front rail. There's no menu diving on the Solo and no display screen; everything has a dedicated knob or button. Well, almost everything: Next to the knobs is a Transpose button with an embedded LED. Hold that button while pressing a key (*F♯1* to *F2*) to transpose to that key. Transposition is in effect until you hit the button again and the LED goes out.

The same button works with a few more keys to handle a few more functions: Using *C1*, you can change the point in the keys' travel at which they trigger sound (though the default setting seemed perfect to me); *B5* toggles a hum effect (does anyone *really* want this?) and *C6* is the MIDI panic. The final four controls are on the rear: knobs for tuning, overall percussion volume, overall percussion decay, and the "Gospel Set" button, which inverts the assignment of drawbar sets so that the left set controls what used to be the right-side registration and vice versa. One of my only complaints is that these knobs are on the back, which makes them difficult to get at, especially if you have another instrument on top of the Solo. Interestingly, the knobs work backwards, which means they're forwards if you're reaching over the keyboard.

Sound

In one word: authentic! The KeyB uses a modeling algorithm—no sampling. Individual drawbar

MORE KEYS OR NO KEYS?

For organ purists who require dual manuals, the KeyB Duo offers all features of the Solo plus four sets of drawbars, reverse-color preset keys, the Normal/Soft volume switch you'd find on a vintage Hammond, pitch-bend and modulation wheels and a Local On/Off switch to control an external MIDI sound source via the lower manual, and string bass (*i.e.* bass pedal sound with a release envelope). Street price begins at $3,999 for the ebony finish. Need all the sound but don't have room for more black 'n' whites? The Expander sells for $1,199.

tones stand up on their own, but integrate sweetly as they should; there's no "beating," phasing, or other strangeness that can reveal a clone when you play more complex chords. You also get full polyphony: I laid both arms down on the keys and every note rang true.

The harmonic percussion has that nice woody thunk. The percussion volume is generous, so if you want that spitting Keith Emerson sound, you'll get it. The vibrato/chorus has a shimmer that's natural yet articulate. I've generally avoided vibrato/chorus on clonewheels, but now find myself using the C1 and C3 settings a lot. And while you can dial the key click up to a startling level, it's super musical, especially set at around 11 o'clock.

The tonewheel crosstalk knob will go from adding a little "hair" to an organ-in-need-of-repair sound if you want it. The reverb has the appropriate spring-tank sound, but to my ears, any knob setting past eight o'clock just sounds too swimmy.

The overdrive on the Solo is killer! There's a fair amount of flexibility between seven and 12 o'clock, giving you lots of different sounds, and it interacts with the internal rotary simulation beautifully. You get a nice "worn" sound starting around ten o'clock, with a little "griddle" by about 11. Anything past noon goes beyond Jon Lord into "Big Muff" stompbox territory, but even that has its place. You'll find that overdrive compresses the volume appropriately; if you need more, just grab the volume knob. Again, this is very well executed and very musical.

KEYBOARD FEEL

The KeyB Solo continues its retro vibe with the keybed itself. The waterfall keys are bone color as opposed to stark white and the black and white key sizes are the same as on a vintage Hammond organ. From my years of playing these organs, the feel is more than in the ballpark; the keys have the right heft and the action is quiet, responsive, and fast without being hair-trigger. Adjusting the trigger point, I didn't notice much change in the feel, but I'm a ham-fisted player, so your mileage may vary. The only thing missing is the smell of oily felt!

Rotary Simulation

Now, what everyone really wants to know: How's the rotary effect? It's beautiful. There's no tweaking: The "Leslie" you own is the one you play through—kind of like when you use the real thing. You can't adjust any of the parameters: not speed, nor ramp times, nor high/low rotor balance, but it sounds great out of the box. At the 2013 Winter NAMM Show, I went back to the KeyB Solo exhibit a number of times and would get lost in the sound for half an hour at a crack through headphones. It was a pleasure to hear that same sound come roaring out of my speakers at home. The balance feels right: You can feel the lower rotor diverge from the upper rotor. I personally don't use fast speed at length: I set my real Leslies' fast motors to be triggered from a momentary switch, and ramp up the speed momentarily in order to make musical statements. For this reason, I really like the in-between speeds on the KeyB Solo and use those for accents.

Presently, though, plugging a momentary switch (such as a generic sustain pedal) into the KeyB Solo will get you toggle behavior: Step on it to change speeds, step on it again to go back. Granted, this is what most organists would expect and want, but I like the acceleration to happen only as long as I'm stepping on the pedal, so I'd like to see this option somehow. The folks at KeyB tell me they may add this option in a future update.

The Leslie sim itself sounds very organic and (here's that word again) musical. The Neo Instruments Ventilator, a dedicated rotary effect pedal (reviewed May '10), has done much to level the clonewheel playing field. I've never played a clone that didn't benefit from the Ventilator . . . until now. I did a number of gigs running the KeyB's direct out (which bypasses the Leslie sim) into the Ventilator, mainly because it's in my rack already and is wired to work with a momentary switch. But I found that the KeyB's own rotary sim adds a gorgeous sparkle to the organ sound that even the Ventilator hasn't surpassed, and the way the Solo's rotary effect interacts with its own overdrive and reverb is inspirational, even if you're running monaurally into the P.A.

A direct out meant for using an external rotary speaker or effect sums the main stereo signal to mono and doesn't carry the internal rotary effect. However, using this also disables the reverb, overdrive, and key click, which is unfortunate, as so much personality lies in these things. That turned out not to be a big issue, because other than the momentary switching, running mono to my Ventilator offered no improvement. That's in no way a criticism of the Ventilator, just kudos for the KeyB. If you insist on a real Leslie, the KeyB has an 11-pin connector and the half-moon speed switch communicates correctly with 11-pin Leslies.

One other thing about the sound: The "smear" is a popular rock organ technique that can add some punctuation when used sparingly. That technique has never really worked for me on organ clones because it's always sounded as though there's too much separation between each note—they never really blend into one sound the way they do when you palm-smear on a real tonewheel organ—but the KeyB really does capture that characteristic.

Conclusions

Keyboardists who require *organ capability* have many excellent options these days, but those who *play organ* have different needs and standards. For organists whose ears demand perfect tone and rotary sound, and whose "muscle memory" demands familiar size, placement, and tactile feedback from all controls, the KeyB Solo really ups the ante. If your playing requires dual manuals, the KeyB Duo (see page 43) offers exceptional value as well. Seriously, the next step up from here is the Hammond New B-3 Portable, which is awesome but a considerably greater commitment in terms of both cost and carrying. As for the Solo, with its dedicated controls for everything and no menus or screens, it's the closest you'll get to a full-console tonewheel organ experience in a single-manual clone that's easily transportable to the gig. Simply awesome! ♫

Bottom Line

The most realistic tactile playing and control-grabbing experience on any single-manual organ clone—and the sound leaves nothing to be desired either.

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KORG KingKorg

BY MITCHELL SIGMAN

THE COMEBACK OF REAL ANALOG SYNTHS HAS PARTIALLY ECLIPSED VIRTUAL analog synths, which just a few short years ago were the go-to solution for classic electronic sounds and knob-grabbing control. A hardware VA still has advantages, though, a big one being more polyphony for the price compared to the real thing. Plus, the DSP power and sound authenticity have improved dramatically since the days of VAs such as the original Nord Lead. Case in point: the new KingKorg, a light and compact 61-key virtual analog synth. We found out that it has more than a few unexpected tricks up its sleeve.

Overview

In today's era of two-octave controllers and mini keys, it's nice that the KingKorg has five octaves of full sized keys. They're velocity sensitive (with three curves, even), but don't transmit aftertouch. The front panel is a handsome champagne gold, offset by a generous smattering of vintage-looking knobs. But the front panel is as far as the metal construction goes: The entire body of the synth is lightweight plastic. This makes for a very easy-to-carry 15 pounds, but also makes the KingKorg feel a bit home keyboard-ish—it bounced around when I pounded out "Won't Get Fooled Again" at a live show. (Your mileage may vary depending on the type of stand you use.) Korg's standard four-way joystick is here, as well as a dedicated pair of octave-shift buttons.

Scanning the front panel, there's a dedicated mic in level for the included vocoder, controls for the familiar Korg tube drive, and high and low EQ boost/cut knobs. Next are dedicated controls for three effects sections: Pre-FX (distortion, overdrive, decimators, and amp emulations), Mod-FX (chorus, flanger, phaser, and the like), and Reverb/Delay. Each of these sections features a large detented knob for selecting the effect type, as well as smaller knobs below for tweaking speed and/or amount. You can also push the knobs (like buttons) to turn effects sections on and off entirely. Though the total number of effects types is limited by this arrangement, the speed and simplicity makes dialing them up a pleasure—you'll see this kind of attention to user interface friendliness throughout the KingKorg.

Front and center is a basic but serviceable two-line blue OLED display along with a large knob doing double-duty for program selection when playing and parameter value entry when editing. Beneath the display are eight sound category buttons that instantly jump to grouped sound types. They may be a little superfluous, but could prove handy for neophytes. KingKorg also has a Favorites button that lets you store five banks of eight sounds each for instant access using the category buttons—ideal for live performance.

Next are dedicated control sections for oscillator, filter, amp, LFO, and envelope, and I'll say it right now: Korg has done a fantastic job giving tremendous control over a powerful synthesis engine using a relatively modest number of dedicated physical controls. The oscillator and filter sections both have their own little OLED displays showing waveform and filter type, respectively. Many of

the synth editing controls perform double or triple duty for KingKorg's multiple oscillators, LFOs, and envelopes, but buttons for toggling between them make this easy. The master Shift key also offers handy jump and shortcut options.

Oscillators

This is where it gets fun. If you're a synth programming fiend, the KingKorg packs a wallop, and it does so with a deceptively easy and powerful interface. The basic voice architecture consists of three oscillators, one filter, two ADSR envelope generators, and two low-frequency oscillators (LFOs). Polyphony maxes out at 24 notes, depending on patch complexity. The KingKorg supports bi-timbral operation, usable as two sounds on independent MIDI channels for sequencing or two playable sounds in keyboard split or layer modes.

The oscillator section features 126 waves including analog models, single-cycle digital waveforms (think Korg's DW-6000 and DW-8000 synths from the '80s), and PCM samples. The final "wave" uses the mic input as an audio source, allowing external signal processing through the filters and effects. In addition to standard coarse and fine tuning controls, there's a knob labeled "Control" that alters the timbre in various ways depending on which wave is selected. With a pulse wave, for example, it controls analog-style pulse width—and has a similar waveshaping effect on saw, triangle, and sine waves, allowing for interesting animation. Some waves add a second control function for further timbral alteration; often this is a harmonic parameter not unlike altering the pitch of a modulating oscillator on a DX-style FM synth. These are begging to be swept with an envelope or LFO—and yes, the "Control" parameters can be modulation destinations.

The KingKorg also features four different noise types ("blue noise," anyone?), with the control knob affecting filtering, vintage Atari-style decimation, or resonance, again depending on the wave selected. There are dual analog waves (tunable to wide intervals) and "super saw"-style waves, as well as ripped synced waves with the sync frequency swept by the magic "Control" knob. Before we go any further, let's point out that unlike most synths, these tricks are available using a single oscillator—and the KingKorg has three. Similarly, there's "Control"-based ring modulation for subtle oscillator cross-mod sweeps, "Xmod" waves for *unsubtle* swept madness, and finally VPM (so many acronyms) for more musical but still extroverted cross-mod craziness. The '80s-style single-cycle digital waves make for all manner of PPG and Ensoniq-style bongs and clangs.

The 30 sampled PCM waves include bread-and-butter acoustic piano, electric pianos, organs, clavs, Mellotron flutes, sizzly brass, orchestral strings, and more. The acoustic piano won't have you ditching your dedicated stage piano anytime soon, but it'll get you through on a rock gig. I was pleasantly surprised by the KingKorg's Rhodes, Wurly, and Clav patches—they sound great.

Snap Judgment

PROS Excellent virtual analog sound quality. PPG-style digital waves and gig-ready samples add to sonic flexibility. Broad selection of filter types that really do sound like the filters on famous vintage synths. Can process external audio. Genius user interface makes creating sounds a joy. Very light weight.

CONS Plastic construction feels delicate. Somewhat spongy keyboard doesn't sense aftertouch. Programs are limited to a single filter type at a time, though you can have two in a split or layer. Maximum of two multitimbral parts.

TO CV OR NOT TO CV?

The KingKorg embraces the resurgence of analog synthesis with a CV/gate output for playing analog synths *sans* MIDI. By default it uses the Hz/volt scaling found in vintage Korg and Yamaha synths, but next to the "MS-20" and "Monotribe" options in Global mode, the "Custom" page also provides for one- or two-volt-per-octave scaling. This is great news for modular and tabletop synth owners, as the KingKorg can be the controller for just about any analog gear you have.

Filter Fun

The KingKorg benefits from R&D already expended on Korg's previous dedicated virtual analog synths, and the filters really shine as a result. There are 18 types including Moog-style ladder, Oberheim-style state-variable, Sequential Prophet-5, Korg MS-20, TB-303 and more, with most available in lowpass, bandpass, and highpass flavors. [*Korg doesn't refer by name to other classic synths' filters—that's us talking—but it's easy to tell which filter types are which. —Ed.*]

I conducted an informal test, comparing the KingKorg's Prophet, Oberheim, and Moog-style filters against a vintage Prophet-5 (revision 3), new Tom Oberheim SEM, and Synthesizers.com transistor ladder filter, respectively, and they all fared quite well. Many virtual analog synths with multiple filter models have a couple of winners and a lot of filler, but the KingKorg's are uniformly excellent.

Though I didn't have a real one on hand to compare, the MS-20 filter models are deliciously aggressive—crank the resonance and watch small pets run for the hills! The "Acid" filter didn't sound *exactly* like a TB-303, but it's still squelch city and usable in a way that doesn't hurt your ears. My only real criticism of the filters is that you can't use two at once in series or parallel; this would've been nice for replicating the MS-20's highpass/lowpass setup. You could work around this by layering similar patches with different filter settings.

All Things in Modulation

The KingKorg's two envelope generators are traditional ADSR affairs, sharing a single set of dedicated knobs along with a button to toggle the controls between envelopes. They're hardwired to filter cutoff and amplitude, but both can be assigned to alternate modulation destinations using any of six modulation routings. Though hidden behind a menu, they're knucklehead simple to use with obvious source, destination, and amount settings—you won't have to crack the manual to figure them out. The two MIDI-syncable LFOs are standard fare, offering saw, square, sine, and random waves with a single set of shared knobs controlling speed and depth. There's a Unison button for insta-big sounds, along with menu parameters for detune and stereo spread and finally, an arpeggiator with all the expected note order modes as well as basic user programmability.

Vocoder

Pressing the dedicated vocoder button instantly transforms any sound into a vocoder-driven patch via the mic jack, but it's best to start with one of the vocoder-specific factory patches. The vocoder is decidedly not finicky about levels: Plug in a mic, turn up the level knob, and you're ready to robot-rock. Better still, it's one of the best sounding emulations of an analog vocoder I've heard—leaps and bounds better than Korg's previous efforts in the MicroKorg and MS2000. It's warm, but has the high-end sizzle and word intelligibility lacking in many digital vocoders.

Conclusions

The KingKorg sits in a unique place in the market. It has cheaper competition from the Roland SH-01 Gaia, Novation UltraNova, and Waldorf Blofeld and from above with the Access Virus. The KingKorg's biggest advantages over the low-enders are its full 61-note keyboard and excellent interface. If you're a sound tweaker or vintage analog aficionado, I can't emphasize enough how easy it is to get around and create great sounds lickety-split. Some may grouse over the basic ADSR envelopes, minor modulation routing limits, or other minutiae, but Korg has made great choices on what to leave out. The avoidance of "parameter overkill" is exactly what makes the KingKorg such a pleasure to play and program.

If you mainly play presets and maybe twist a filter cutoff here and an envelope time there, this may not factor into your selection. Either way, the sound quality is excellent and a testament to how far virtual analog synthesis has come: In all of the insanely cross-modded, waveform-shredding noises I could conjure, I never heard a hint of digital aliasing or nasty clipping. My only real nit to pick is the plastic construction—I'd be extra cautious plugging cables in and out of the dainty rear panel, but as mentioned, the 15-pound curb weight sure makes it easy to take to the gig. Regardless, the KingKorg is a great sounding, affordable virtual analog synth that begs you to twist knobs. For a street price of $1,299 for all that it does, you can't go wrong. ♫

Bottom Line

The KingKorg ups the ante in affordable virtual analog synths with this great sounding, lightweight instrument.

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Video explorations of the KingKorg's vocoder, filter types, and more.

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ALESIS Vortex

BY MITCHELL SIGMAN

ORIGINALLY A HOT PROPERTY WITH FUSION SOLOISTS IN THE '70S AND NEW wave keyboardists in the '80s, keytars are making a big comeback. With prices of vintage keytars escalating madly on the used market, Roland has stepped up their offerings, and now Alesis slings on the Vortex, a controller-only keytar at a very approachable price.

Form Factor

The Vortex features a three-octave keyboard transmitting both velocity and aftertouch, wrapped in a sleek high-grade plastic case—think fancy laptop. The rubber buttons and trigger pads have a nice tactile feel, and most sport blue LEDs at their edges, a nice detail when playing on dark stages. Left-hand controllers include a thumb-operated pitch wheel and reassignable volume slider on the top edge, a ribbon controller, a large sustain button, octave up/down buttons, and three buttons for selecting keyboard split zones. The butt of the handle contains three blue LEDs that flicker when notes are played. They're not mentioned in the manual, and I couldn't discern any functional pattern to their blinking, so we'll assume they're for showmanship value.

The front panel features an easily readable three-digit LED readout, MIDI program change up/down buttons, and buttons used to edit and switch the Vortex's internal control presets (more on these below). Three assignable knobs send MIDI control data when you're playing and adjust internal parameters when you're editing the presets. Eight drum trigger pads round out the front panel. The top four pads are inconsistently sized to belnd with Vortex's swoopy angular case, but this wasn't an issue in use. In fact, I could even see the

Alesis throws in a white nylon strap, but fully extended to around 48 inches, I found it too short—it hung at belly level on my average frame. The Vortex is lightweight and shoulder-easy at six and a half pounds, which is less than most electric guitars.

Snap Judgment

PROS Solid build quality. Large variety of assignable MIDI controllers including a ribbon and accelerometer (neck tilt detection). Control assignments and splits are easy to make and can be saved. Keys sense aftertouch.

CONS No internal sounds; it's a controller only. Accelerometer has somewhat fussy tilt response.

Bottom Line

A keytar controller with aftertouch and patch memory for this little money? Yes please!

$399 list | $299 street | alesis.com

On the right side you'll find a switch for selecting batteries (four AA) or USB power, a standard five-pin MIDI output, a sustain pedal input, and a jack for a power supply (not included).

Next to the battery compartment is a separate small chamber with a snap-in door; the manual states this is for USB or MIDI cables, but they'll have to be pretty short to fit.

Setup

For those seeking a plug-and-play controller, the Vortex is simple. The majority of its basic controls are easy to understand, and if you set up keyboard splits and MIDI controllers on the receiving instrument or computer side, you may never need to crack the manual.

However, the Vortex also delivers for players who want to set up more control on the *controller* end of things. You can store 24 presets containing MIDI controller assignments and keyboard splits. These are selected by pressing the patch bank select button to cycle through three banks (dedicated LEDs display bank A, B or C), then pressing one of the eight drum pads to choose specific presets. This can mean up to four button presses to select a preset, but the buttons' positive tactile feedback makes the process zippy, and once a patch is selected, the drum pads revert to play mode.

Keyboard and Performance Controls

Vortex's unweighted three-octave keyboard transmits both velocity and aftertouch—the latter being a very nice addition given its low price. Though its action is relatively light, it has a solid feel exceeding that of many non-keytar controllers in its price class. The drum pads deliver as well: In addition to sending MIDI note data, they can send continuous controller messages (either momentarily sending a new value or toggling between two values) or MIDI program changes. You can set each pad's behavior independently, allowing a great deal of flexibility, and all settings are stored in Vortex patches. For users short on MIDI modules or plug-in synths, Alesis also throws in Sonivox DVI, a sample-based virtual instrument.

The Vortex's most talked-about feature is a MIDI-assignable accelerometer. This is essentially a tilt detector that outputs MIDI controller data when you swing the Vortex's left (neck) side up toward a vertical position. By default it sends modulation wheel messages with a value of zero when fully horizontal, progressing to 127 when you point the neck at the sky. You can reassign it to any MIDI continuous controller, and via a simple setup procedure, you can change the start and stop positions so that moving the neck through a tighter arc fully sweeps the value from 0 to 127. Conversely, you can set minimum and maximum controller values so that tilting the neck sweeps the parameter in a limited range—perfect if you want to add vibrato, for example, that doesn't get so deep it destroys the sense of the note's center pitch. You can similarly scale the ribbon, slider, and the three knobs.

Though the tilt detector works as advertised and can be quite fun, I'm not convinced it will revolutionize live performance. I found pivoting the entire instrument up and down with my left arm wasn't entirely natural—it requires a lot of movement compared to a standard wheel or ribbon. More importantly, the accelerometer spits out somewhat random controller data when held at in-between positions, which created a burbling sound when I had it assigned to filter cutoff. Switching to the left-hand ribbon was an instant improvement, as the Vortex's ribbon is supremely smooth and accurate. The ribbon can latch its position or return to zero after you lift your finger. Though I found the rubberized slider handy for quick volume adjustments, I had a hard time adapting to using my thumb for pitch-bending. I'd prefer small finger-controlled wheels (i.e., I'd like to see the axis of movement turned 90 degrees) but this may be the guitarist in me talking. Left-hand controller preferences are a personal thing, so try it out—you may feel the opposite way.

Conclusions

Excluding vintage keytars, the Vortex's main competition is Roland's Lucina (reviewed Jan. '12), which streets for $399. A hundred more clams than the Vortex buys you a self-contained synth with an internal USB audio player. That said, the Lucina has fewer performance controls and doesn't come close to the Vortex's extensive controller mapping flexibility. Generally, the Lucina has a simplified home-keyboard feel in contrast to the Vortex's professional vibe, and I found the Vortex's angular "folded paper" design more visually appealing. Though the newfangled tilt feature may not be 100 percent ready for prime time, the Vortex's array of highly configurable performance controls more than make up for that. At just $299 street, the slick, feature-laden Vortex is a one heck of a good value. ♫

First look at the Alesis Vortex.

keyboardmag.com/june2013

AKAI PROFESSIONAL

MPC Renaissance

BY JOHN KROGH

THE AKAI MPC HAS LONG BEEN THE REIGNING CHAMP OF HARDWARE-BASED sampler/sequencers, enjoying cult status among beat makers across all styles of music. But as computers and music software have become more powerful, the stand-alone approach of the MPC series is starting to look a bit dated. Though the MPC has always offered a creative and inspiring workflow, some argue that it hasn't kept pace with the flexibility of modern DAWs. Akai aims to change this with the latest MPC series, which attempts to marry all the benefits of hardware—dedicated controls, dynamic pads, easy sound auditioning, fast sample mapping, and so on—with the power and convenience of software. Have they succeeded? Read on as we review the flagship MPC Renaissance.

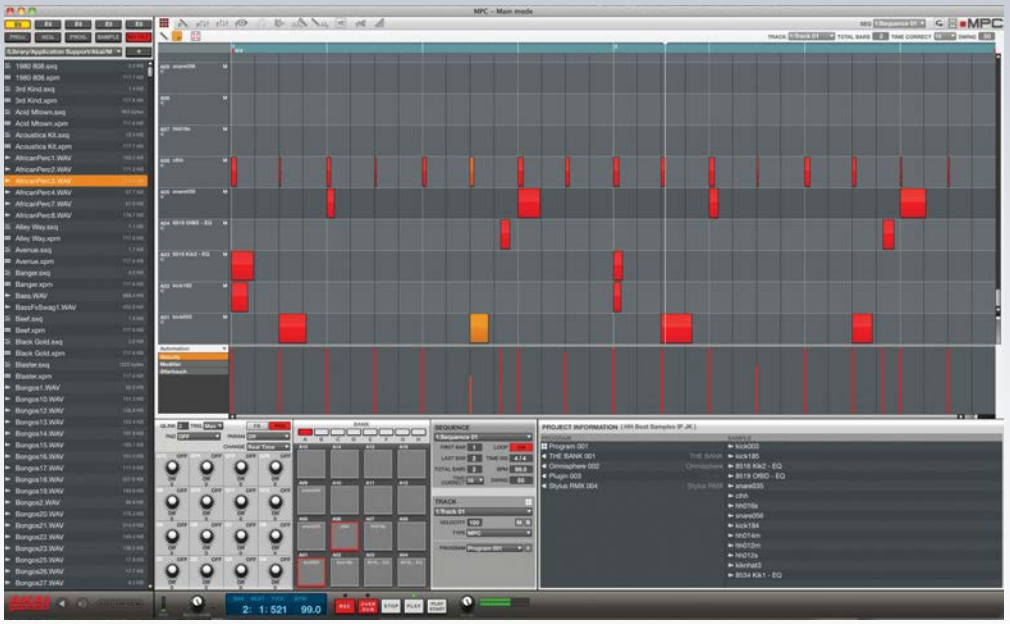
Overview

The MPC Renaissance is a hardware-plus-software system that combines a dedicated USB controller/audio and MIDI interface with a software MIDI sequencer/sample editor that runs on your Mac or PC.

Your computer handles all the sound processing, and must be connected to the Renaissance (Ren from here on) in order for the MPC software to work. Likewise, without the software, the Ren hardware is a good-looking paperweight.

It's a shame that you need the hardware to use the software, since I can imagine many users (myself included) wanting to pop open their laptops to make some quick tweaks during a spare moment in a session, without the hardware unit present.

That problem aside, the hardware is impressive. The build quality is solid, with dedicated buttons, knobs, and other controls clearly labeled and sensibly arranged. Having spent years working with different hardware workstations, I was able to get up and running quickly, which is a testament to the Ren's thoughtful design and intuitive layout.



In the MPC software, we see the bin of audio files and programs on the left, sequence data in the center pane, control knob and pad assignments below in the middle, and project information—including hosted third-party virtual instruments and the patches they're using—at bottom right.

Controls

The Ren features eight pad banks and 16 velocity-sensitive drum pads for a whopping 128 possible pad assignments. That's more than any previous MPC and probably more than anyone could ever use, but if you like to build monster kits, the Ren is happy to oblige. Speaking of the pads, they're by far the most dynamic and musically responsive I've ever played—and I own several USB pad controllers. In fact, when I first started programming it felt like I was working with a true electronic *instrument* as opposed to a "controller for software"—there was a definite inspiration factor. I can't remember ever having that same experience with any other USB controller I've played, no matter how well it integrated with the software I was using.

The 16 endless encoders can be assigned to a number of parameters and are automatically mapped to certain parameters depending on what mode the MPC software is in. The tops of the encoders are touch-sensitive and can function like momentary switches so you can toggle effects and filters, for example.

Each encoder is surrounded by an LED ring that indicates knob position. Similarly, the pads light up in one of three colors to indicate modes of operation. I found this visual feedback to be a big help when I was building sampled kits and programming grooves.

Sequencing and Sampling

The MPC software is the "brain" of the system wherein MIDI sequencing and sampling take place. Because the MPC software can function as a stand-alone sequencing environment or within a VST, AU, or RTAS host, you can work with the MPC in a few different ways. You could lay down parts using the software/hardware combo in stand-alone mode, and then migrate your beats-in-progress into a DAW for overdubbing linear audio tracks and full-featured mixing.

You can also work with the MPC in parallel with your DAW of choice, bouncing between beat creation, sample manipulation, and pattern sequencing in the MPC software (running as a plug-in inside your DAW), and conventional linear sequencing with software instruments hosted in your DAW. But because the MPC software can also host third-party VST or AU instruments itself, you can build arrangements using all of your favorite soft synths entirely within the MPC's inspiring environment.

Even though Logic Pro is my DAW of choice, I found the MPC software a refreshing departure from the norm. The sequencing features are limited compared to most DAWs, but working in the MPC software I ended up being more focused on capturing musical ideas and less distracted with options and session housekeeping. Put another way, there was a fluidity and a level of spontaneous improvisation that I don't often experience when I write inside of Logic or many other DAWs.

The process of sampling into the MPC and assigning sampled bits to pads is equally engaging and certainly more fun than trying to build sampled kits with any software instrument I've used. While the sample editing features are somewhat crude compared to full-featured software samplers such as Kontakt, the MPC offers basic options such as reverse, normalize, fade in/out, and perhaps most importantly, "chopping." This is Akai's term for dividing a loop into individual slices *á la* ReCycle. Chopping worked okay in my tests, but with most of the material I sampled I still had to manually adjust chop/slice locations, which is easy enough to do. ReCycle would have been easier, though.

Pad Programming

Up to four samples can be assigned to each pad and the samples can be set up to trigger in several ways, such as via velocity. Round-robin triggering is also possible so that repeated triggers will alternate among the loaded samples.

Each sound assigned to a pad can have its own velocity and coarse/fine tuning settings; however, all the samples on a single pad share the same filter and volume envelopes. This is somewhat limiting for sound design. For example, I often employ different filter types and settings to each layer in a stacked sample sound. That said, it's possible to link multiple pads using the Simultaneous Play settings, which let you define up to four pads' worth of sounds that are triggered by hitting one physical pad only. To be fair, Native

Snap Judgment

PROS Intuitive hardware user interface. Dynamic and responsive pads. Inspiring and creative workflow. Works as stand-alone system and as plug-in within other DAWs. Built-in audio and MIDI interface. Great build quality.

CONS Some software user interface oddities. Doesn't recognize REX slice markers. Hardware and software can't be used separately.

GOZINNAS AND GOZOUTTAS

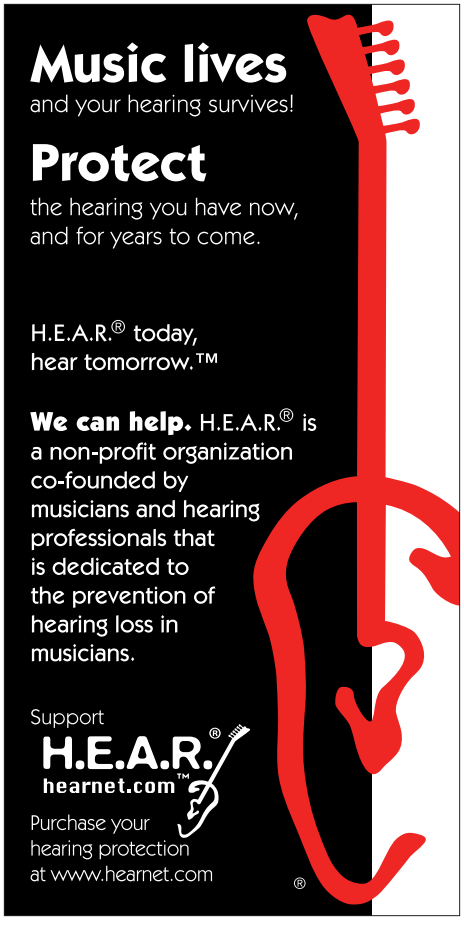
The MPC Renaissance's I/O includes stereo RCA (switchable between line and phono), two XLR combo inputs (with phantom power), 1/8″ and 1/4″ headphone jacks, and four 1/4″ outputs. A built-in two-port USB hub lets you connect external storage and additional MIDI controllers. I could even connect a USB mouse directly—the combination of my computer screen, the MPC directly in front of me, and control of the software proved to be ideal. In keeping with previous MPCs, the Ren sports two MIDI ins and four MIDI outs, which gives you room to grow and makes the Ren the central hub in your studio.

Instruments Maschine doesn't allow for more than four samples per pad and it doesn't provide dedicated filters or envelopes, either.

In Session

During the course of the review I put the Ren through its paces as a stand-alone system and as a plug-in within Logic. If I had my choice, I wouldn't have even bothered with running the MPC inside of Logic because using the MPC software as a plug-in within a host DAW on a Mac requires setting up IAC (Inter-Application Communication, via Apple's Audio MIDI Setup utility) and configuring MIDI Machine Control in the host. How 2003 is that? ReWire would be a much better way to go for sync and transport control, so I'm hoping Akai makes it happen in a future update.

As a stand-alone system, the MPC software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proved ideal for inspiring, capturing, and tweaking ideas to a state where I could then export my works-in-progress as audio files (the MPC exports audio as stereo mixes or multitrack parts in a variety of formats, including MP3) and further build on them in Logic. However, I did struggle with the MPC's non-standard user interface conventions. There's no Window menu, for example, and the Edit menu lacks basic commands such as "add new track" and "delete track." In fact, technically you don't add new tracks to a session as you would in a DAW. You choose a Track Type (plug-in, external MIDI, or MPC Program), and then add a new Program, into which you can load a Drum or Keygroup Program (MPC-specific presets).

I understand Akai's choice to build a user interface that closely mirrors the MPC legacy, and in many ways I enjoyed creating music with what felt like a dedicated workstation. But I think they could strike a better balance between old-school feel and the conventions that many of us "in the box" types expect.

One of the obvious benefits of hardware is that you can easily audition sounds to find inspiration without having to hunt and click—a definite *disadvantage* of most software instruments and DAWs. Here, the browser offers many of the same advantages as true hardware instruments. You can drill down into folders of samples and programs to audition and load sounds quickly, which was a fast and fun way to assemble collections of sounds into a Program.

I found it odd, however, that the process of auditioning preset sounds from *plug-ins* isn't done from the browser, but through a menu in the Main Mode display. I would expect this in a traditional DAW, but I found it to be somewhat of a disconnect from the MPC's otherwise intuitive, hardware-like operation.

Fortunately, you can audition your plug-ins' patches rather quickly, provided you first select a sound preset via the mouse, and then use the QWERTY keyboard's up and down arrows to navigate through the sounds (this is a tip that's not mentioned in the user manual). I'd love to see a future version that expands the browser options to allow for sound category tagging and a way to scroll through sounds directly from the MPC hardware in the same way that you can scroll through file folders to look for samples. While I'm at it, I'll request that REX file slice locations be recognized. As it is, slice markers are ignored and you have to "re-chop" REX loops with the MPC in order to assign slices to pads.

Conclusions

Akai MPC hardware has always been about a creative workflow that affords easy sampling, slicing, pad assignment, and improvisation. With the Renaissance, Akai succeeds in bridging the divide between hardware beat making and computer-based recording in an elegant and inspiring way. The MPC software is still young and there's much room for improvement, but it's solid and Akai has released frequent updates demonstrating that they're listening to customer feedback and that the company is putting resources into making the new MPC series a viable platform. The Renaissance hardware is a true joy to behold and play, and the combination of hardware and software is sure to win fans among even the most skeptical hardware junkies. In this regard, the Renaissance proudly continues the MPC legacy. ♫

Bottom Line

If creating music MPC-style is how you think, the Renaissance should be the nerve center of your studio.

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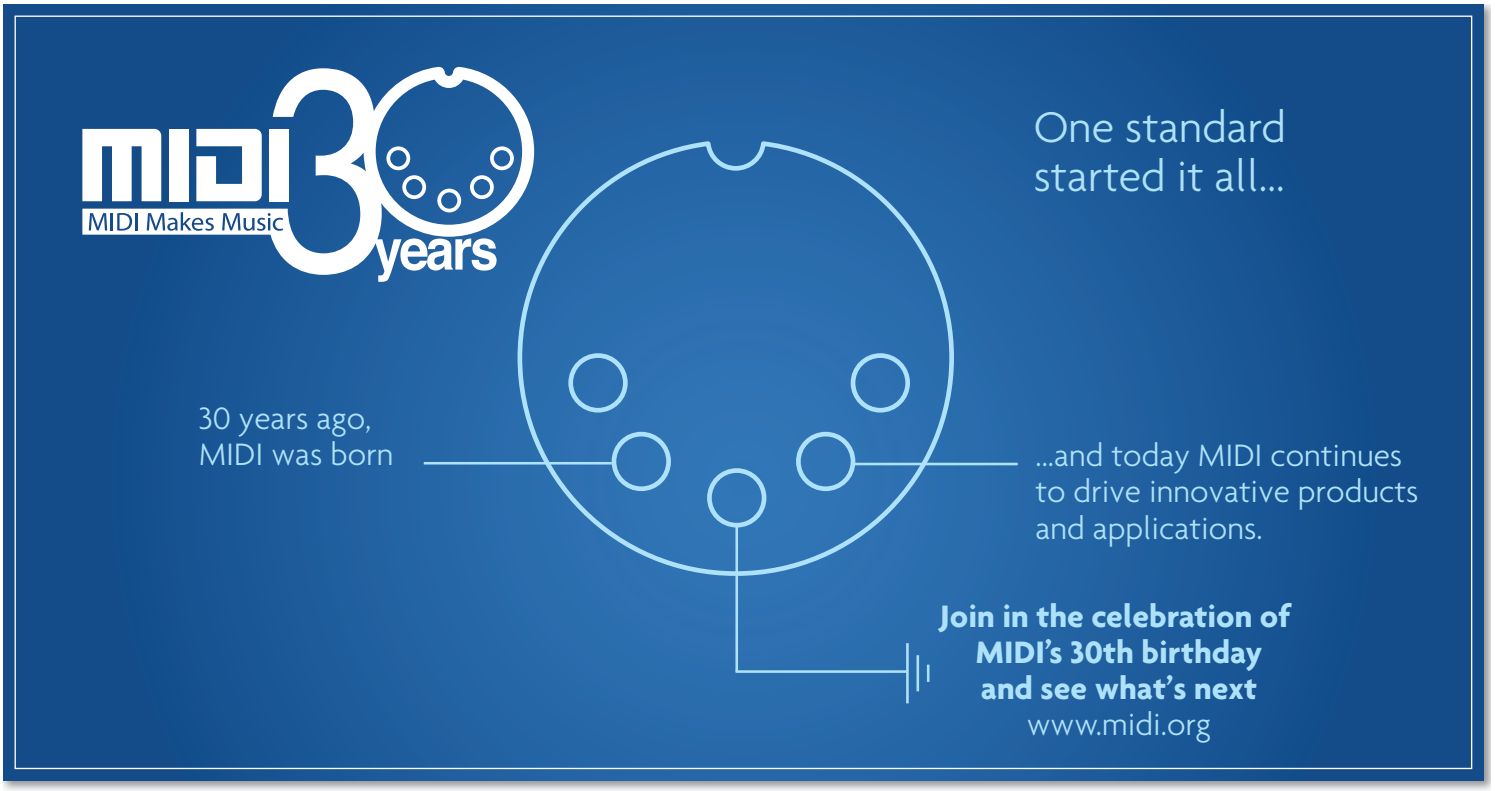
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Ivory's familiar main window is where you select presets and manage sonic details such as resonances, mechanical noises, release samples, and an optional synth pad layer.

SYNTHOGY

Ivory II American Concert D

BY RICHARD LEITER

OUT OF DOZENS OF SOFTWARE PIANOS, THE ONE THAT HAS EMERGED AS THE go-to recording tool—the one on the DAW templates of so many of my composer colleagues—is a decade-old preset called "Warm Concert D" from Synthogy's first Ivory release. The source piano was a German-built Steinway sampled in an acoustically near-perfect concert hall in Quebec. In the years since, Ivory has added more pianos including the ten-foot Italian Grand (reviewed Jan. '12) to its stable. But in that same Quebec hall lived another Steinway D, made in 1951 from old-growth wood recycled from pre-World War II era buildings. It's a very special instrument, adored (and signed) by Glenn Gould and Rudolf Serkin. Two years ago, the Ivory team set out to bring this amazing piano to life in American Concert D. Not only have they captured the best of the Steinway qualities that defined their first effort, they've created a truly transcendent virtual piano that's also flexible enough to become the new go-to standard.

First Impressions

The obligatory disclaimer: Nothing captures the true experience of actually playing a nine-foot Steinway concert grand. Having said that, American Concert D is an awesome virtual piano that, for under 200 dollars, is going to be nearly impossible to resist. If you've played a superior concert grand, you've experienced the sense of potential, power, and clarity that a thoroughbred offers. It can be inspiring and daunting. You get that here, along with the shimmering upper mids and profound bass that characterize the best of this breed.

Whether you're whipping off lyrical jazz lead lines with subtle harmonies or slamming gospel octaves in the bass and upper registers, you rarely

Snap Judgment

PROS Jaw-droppingly realistic, playable, and musical recreation of a legendary grand piano. Surprisingly at home in any genre of music. Huge sample set of 49GB. Highly customizable sonic details. Easy installation. Standalone or plug-in operation on Mac and Windows.

CONS An SSD drive is recommended for polyphony in the "just because you can" stratosphere.

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The Session screen includes settings for velocity response, polyphony ceiling, half-damper support, alternate tuning tables, and more.

feel that you're hitting the sonic limits of American Concert D. And the acoustic reproduction is dazzling; you *can* sound like Keith Jarrett or Glenn Gould, if only for a phrase or two. When you're ready to track, it really is like having a legendary Steinway in the studio, and more and more working musicians are using Ivory live on Receptors and laptops.

Parameters and Performance

There's almost no learning curve. Like the original Ivory, you select an instrument—Synthogy provides 27 presets with descriptive names like "Carnegie Hall American" and "Live Jazz American"—and an optional synth/pad layer and alternate soundboards with varying degrees of resonance if you wish. The first preset, "American Concert D," is exquisite—you could use just this for the rest of your life and not want for anything. But you can also dial in a dozen parameters such as key noise, stereo width, listening perspective (player or audience), lid position (full stick does it for me), EQ, damper pedal noise, and convincing reverb ambiences.

Piano libraries are enormously complex, with parameters like release samples (what happens when you take your finger off the key), soft pedal samples, half pedal samples, and both sympathetic and damper resonance, in addition to the 20 velocity layers in each note if you use the full-bore presets. Of course, you can turn any of these features on or off as well as choose key sets with fewer velocity layers, in order to limit the amount of work your computer has to do.

American Concert D lets you enlarge its memory cache and set your polyphony ceiling from four to 1,000 voices. Plus you can select from 22 different key sets that favor various styles of playing and scale down the velocity layers. On my 12-core Mac Pro with the Ivory samples on their own 7,200 rpm internal drive and a ceiling of 100 voices, it was actually hard to force a slow disk warning. With 200 voices, holding down the damper pedal and playing with my forearms could cut off notes—but who plays like that?

Even a more modest computer can handle as much Ivory as you'd need for actual musical use. "Mobile, I've run it on a late 2010 MacBook Air with just 4GB of RAM and an Intel Core 2 Duo chip," offered editor Stephen Fortner, "and have never had robbed notes or glitches interrupt an actual gig or session."

Sound Quality

I played American Concert D through old TOA and newer Tannoy studio monitors, Yamaha DXR10 active P.A. speakers, and AKG K240DF headphones, and I never felt that I even got close to the sonic limits. There was no sort of piano sound—whether standard or slightly more affected—that I couldn't conjure. Every listening system sounded different, of course, but I never lost the uncanny precision of the upper mids and the grand sweep and thunder of the bass register, particularly when I was playing octaves.

Gripes? The *B*♭ above middle *C* and the *D*♭ above that have a harshness that almost certainly is a factor of the source piano and not the Ivory sound engine, as we couldn't reproduce it using other Ivory pianos. Also, be prepared to spend some time dialing in a velocity map. Although Synthogy provides ten presets, four individual parameters, a graphical display of the curve, and a calibration wizard, after 20 minutes of fiddling I went back to the default velocity map and just adjusted my playing. Let's face it, though, Ivory has been spoiling us pianists rotten since the very first version, and overall, American Concert D takes this to new heights.

Conclusions

Ivory II American Concert D is as close as it gets to the real thing. It captures the dramatic dynamic range of its unique source Steinway with its characteristically shimmering upper mids and thunderous bass. Though it samples a piano with a specific provenance and character, that character never gets in the way of versatility: Synthogy's virtual version is equally at home in jazz, rock, and classical settings. It's also its own instrument—you don't need any other Ivory product to run it. If you have to pick only one software piano, American Concert D will inspire you to play better and is likely the best money you'll spend all year. For the price of a nice dinner for two, it's a no-brainer of a Key Buy winner. ♫

Bottom Line

American Concert D just may be the best all-around premium software piano instrument so far.

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SOUNDCLOUD

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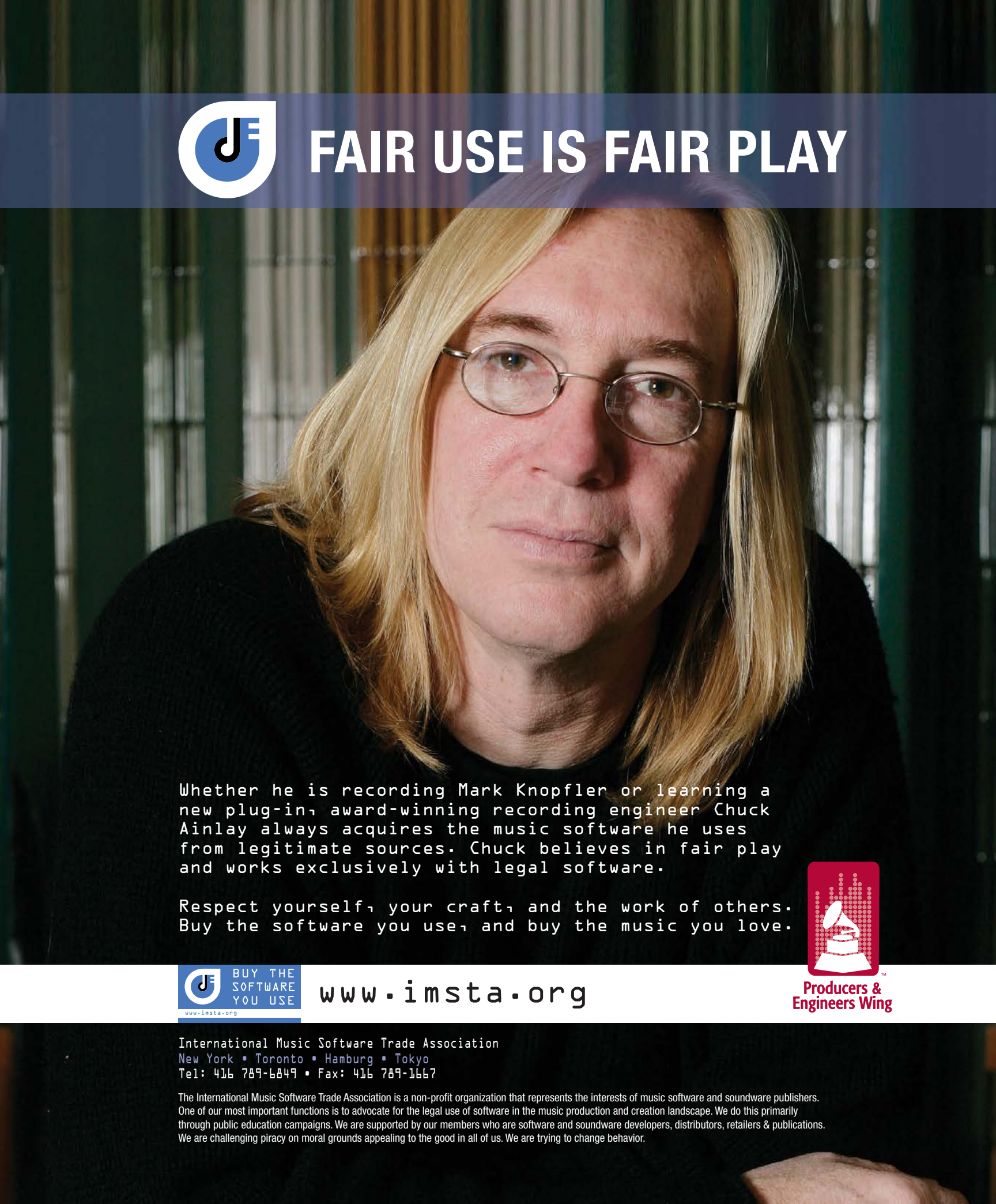
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ARTURIA iMini

Keyboard K KEYBUY AWARD

BY FRANCIS PRÈVE

ARTURIA'S REPUTATION FOR IMPECCABLE EMULATIONS OF CLASSIC ANALOG synths borders on legendary, so when they dropped their iMini—a full recreation of the Minimoog—the iOS synth community got very excited.

The attention to detail in this app is exceptional. Rather than load the iMini down with tons of extraneous bells and whistles, Arturia kept the experience clean and tidy, focusing on the Minimoog's original architecture: three oscillators feeding a four-pole resonant lowpass filter, along with a couple of envelopes.

As with the original Mini, there's no dedicated LFO. Instead, oscillator 3 can be switched to low-frequency mode and used for vibrato, trills, and such. Tuned in the audio range, oscillator 3 can be the modulator for FM synthesis. This is true to the original and great for harsher, more industrial sounds.

While the iMini's additional features are kept to a minimum, there are several amenities that are extremely useful. On the vintage side, a chorus and analog-style delay do a great job of enhancing the iMini's sound in a contextually appropriate way. After all, back in the '70s, chorus and delay pedals were as commonplace in touring rigs as the synths themselves—and Arturia's versions sound wonderful.

The iMini can play polyphonically, with the number of voices being determined by your iPad's CPU. On an iPad 1, you're limited to monophonic use, and that's with the effects off and basic patch settings. Newer iPads can handle the app much more effectively, but it would have been nice for Arturia to include a "lite" mode as we've seen on some other synths, so that first-gen iPad owners can get into the game, too.

Another retro addition is a basic arpeggiator with up, down, up/down, random, and note order modes. You can also set the octave range, speed, number of repetitions, and latch mode, but other than that, it's strictly the essentials.

Touchscreen-based goodies include a pair of Kaoss-style X/Y controllers, with each axis freely assignable to any of the iMini's knobs. The app also supports Korg's WIST protocol, so you can jam with other iPad-based musicians. Arturia also included support for the AudioBus and TableTop inter-app audio systems (for piping audio from iMini directly into GarageBand or other iPad DAWs), as well as virtual MIDI, making iMini a true team player in the iOS ecosystem.

All in all, the iMini is an outstanding entry into the iOS universe from Arturia—a company that really knows how to make soft synths sound warm and rich. Everything is extremely well implemented, and Arturia donates a portion of the sales proceeds to the Bob Moog Foundation. If you're on a newer iPad, this is 20 bucks very well spent, and an obvious Key Buy. ♫

Snap Judgment

PROS Accurately and warmly recreates the overall Minimoog sound. Built-in arpeggiator, chorus, and analog-style delay. Supports WIST, AudioBus, Virtual MIDI, and TableTop protocols for robust iOS integration.

CONS Requires iPad 2 or newer to be really usable.

Bottom Line

A convincing and faithful Minimoog emulation for the iPad.
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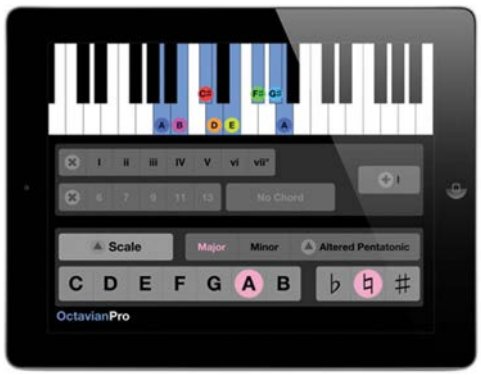

Octavian Pro

By Bitnotic

Available on the iTunes App Store

Definitive music theory resource for students, teachers, songwriters, and musicians. Features 500+ scales, 50+ chords, progression sequencer, dictionary, and more. Keyboard Magazine said of Octavian 1.1.0 (Jan 2010): "It's a cheat sheet no keyboardist should leave home without." Compatible with iPad, iPhone, and iPod touch.

SRP: $2.99

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5 THINGS I'VE LEARNED ABOUT Being a Better Session Keyboardist

BY MATT ROLLINGS

Los Angeles-based keyboardist and producer **Matt Rollings** is one of the most sought after session players on the planet. Most recently, Rollings has worked with Mark Knopfler, Lyle Lovett, Mary Chapin Carpenter, and Richie Sambora. Find out more at mattrollings.com.

I'VE BEEN PLAYING PIANO AND KEYBOARDS ON RECORDS FOR OVER 25 YEARS, and have played on over 600 recordings. Throughout it all, certain things have become universal for me. My goal has always been to play intelligently and with integrity, to make the music feel good, and to be professional, inspired, and a nice guy. Here are some things I've learned that I hope will help you succeed on your next session.

1. Improvisation = Inspiration

During the recording of Lyle Lovett's song "North Dakota" from his album *Joshua Judges Ruth*, we were in between takes and I was very much in the mood of the song and inspired to play a little. I began experimenting with a moody little pattern, and a few seconds later Lyle asked, "What's that?" I replied that I was just making it up, and he immediately suggested we try my riff as an intro. It ended up becoming a signature part of the song.

2. "Drop Third" Chords

This technique makes the piano sound orchestral yet streamlined in a rhythm section, and is based on the way chords are often voiced on guitar. Take a triad in any inversion and drop the middle note down an octave. In root position, this will be the third (minor or major), hence the term. If you start with a root position triad with a dropped third and then go through the circle of fifths, the third becomes the root of the next chord, then the fifth of the next, and finally the third again. This makes for very smooth voice leading, and builds a warm foundation while leaving room for other instruments. Mary Chapin Carpenter's song "Jericho" offers a nice glimpse into this style of playing.

3. Singer Strategies

Accompanying singers requires big ears and careful choices. In general, simple is best, and playing even less than you think you should usually ends up being the right move. Sometimes, however, it's good to lead as well. As an accompanist, you're not simply supporting the singer; you're also creating a dynamic platform from which the singer can launch phrases. Try playing an emotional chord sequence or lick leading into a new section of the song. You might just create a moment that inspires the singer and lifts their performance into an entirely new place.

4. In Solos, Feel Wins

Back when I was in college, a teacher once told me to "play the feel, not the solo, and the solo will take care of itself." What this means is that first and foremost, you need to groove. When I'm "dealt" a solo, that's where I go first: rhythm and energy. I usually start by playing something rhythmic, like a pattern that's easy to "pocket" with the band. Once I'm grooving, I relax and get out of my head and into my body. At that point, whatever comes out generally works, because the feel is intact.

5. Be Prepared, Be Relaxed, and Be Early

If your session involves a fair amount of sight-reading, ask for PDFs of the charts ahead of time. Know the names of the producer, artist, and engineer before you walk into the studio, and never arrive hungry. It's also important to walk into the studio relaxed and in good spirits. This sets a positive tone and helps you maximize your prep time before the downbeat. Finally, be early. When you're early to a session, you have time to get your mind in the right space for the work that lies ahead.

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